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**BULLETIN**

OF

**A. & T. COLLEGE**

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*1.72*

*Published by*

**THE AGRICULTURAL AND TECHNICAL  
COLLEGE OF NORTH CAROLINA**

*Obedience to the Law is the Largest Liberty*



**Issued Quarterly**

**GREENSBORO, NORTH CAROLINA**

**CALENDAR 1949-1950**

*1949-1950*  
*CATALOG*  
*(put 1950-1951)*

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**BULLETIN**  
**OF THE**  
**Agricultural *and* Technical**  
**College**

**OF NORTH CAROLINA**  
**(Co-Educational Institution)**

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**FIFTY-FOURTH ANNUAL CATALOGUE**

**1948-1949**

**With Announcements for**  
**1949-50**

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Recognized as A STANDARD "A" GRADE COLLEGE  
by the North Carolina Department of Education, the  
Council of Education of the State of Pennsylvania, the  
American Medical Association, the Southern Asso-  
ciation of Colleges and Secondary Schools.

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**GREENSBORO, NORTH CAROLINA**

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Greensboro, N. C. 27411

## CALENDAR FOR 1949

JANUARY							APRIL							JULY							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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2	3	4	5	6	7	8	3	4	5	6	7	8	9	3	4	5	6	7	8	9	2	3	4	5	6	7	8
9	10	11	12	13	14	15	10	11	12	13	14	15	16	10	11	12	13	14	15	16	9	10	11	12	13	14	15
16	17	18	19	20	21	22	17	18	19	20	21	22	23	17	18	19	20	21	22	23	16	17	18	19	20	21	22
23	24	25	26	27	28	29	24	25	26	27	28	29	30	24	25	26	27	28	29	30	23	24	25	26	27	28	29
30	31													31							30	31					
FEBRUARY							MAY							AUGUST							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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6	7	8	9	10	11	12	8	9	10	11	12	13	14	7	8	9	10	11	12	13	6	7	8	9	10	11	12
13	14	15	16	17	18	19	15	16	17	18	19	20	21	14	15	16	17	18	19	20	13	14	15	16	17	18	19
20	21	22	23	24	25	26	22	23	24	25	26	27	28	21	22	23	24	25	26	27	20	21	22	23	24	25	26
27	28						29	30	31					28	29	30	31				27	28	29	30			
MARCH							JUNE							SEPTEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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13	14	15	16	17	18	19	12	13	14	15	16	17	18	11	12	13	14	15	16	17	11	12	13	14	15	16	17
20	21	22	23	24	25	26	19	20	21	22	23	24	25	18	19	20	21	22	23	24	18	19	20	21	22	23	24
27	28	29	30	31			26	27	28	29	30			25	26	27	28	29	30		25	26	27	28	29	30	31

## CALENDAR FOR 1950

JANUARY							APRIL							JULY							OCTOBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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15	16	17	18	19	20	21	9	10	11	12	13	14	15	9	10	11	12	13	14	15	15	16	17	18	19	20	21
22	23	24	25	26	27	28	16	17	18	19	20	21	22	16	17	18	19	20	21	22	22	23	24	25	26	27	28
29	30	31					23	24	25	26	27	28	29	23	24	25	26	27	28	29	29	30	31				
							30							30	31												
FEBRUARY							MAY							AUGUST							NOVEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4							1						1	2	3	4					
5	6	7	8	9	10	11	7	8	9	10	11	12	13	6	7	8	9	10	11	12	5	6	7	8	9	10	11
12	13	14	15	16	17	18	14	15	16	17	18	19	20	13	14	15	16	17	18	19	12	13	14	15	16	17	18
19	20	21	22	23	24	25	21	22	23	24	25	26	27	20	21	22	23	24	25	26	19	20	21	22	23	24	25
26	27	28					28	29	30	31				27	28	29	30	31			26	27	28	29	30		
MARCH							JUNE							SEPTEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4							1						1	2	3						
5	6	7	8	9	10	11	4	5	6	7	8	9	10	3	4	5	6	7	8	9	3	4	5	6	7	8	9
12	13	14	15	16	17	18	11	12	13	14	15	16	17	10	11	12	13	14	15	16	10	11	12	13	14	15	16
19	20	21	22	23	24	25	18	19	20	21	22	23	24	17	18	19	20	21	22	23	17	18	19	20	21	22	23
26	27	28	29	30	31		25	26	27	28	29	30		24	25	26	27	28	29	30	24	25	26	27	28	29	30
																					31						

# COLLEGE CALENDAR

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## 1949-1950

- September 12-13, 1949—Pre-Session Faculty-Staff Conference  
September 14-15—Freshmen Orientation and Medical Examination  
September 15-16—Freshmen Medical Examination and Registration  
September 16-17—Upperclassmen Medical Examinations  
September 19—Upperclassmen Medical Examinations and Registration  
September 20—Classes begin  
September 27—Last day for change in schedule  
December 17-19-20-21—Fall Quarter examinations  
January 2, 1950—Registration for Winter Quarter  
January 3—Classes begin  
January 10—Last day for change in schedule  
March 15-16-17-18—Winter Quarter examinations  
March 20—Registration for the Spring Quarter  
March 21—Classes begin  
March 27—Last day for change in schedule  
May 23-24-25-26—Spring Quarter examinations  
May 27—Senior Class day  
May 28—Baccalaureate  
May 29—Commencement

## HOLIDAYS

- Thanksgiving, November 24-25, 1949  
Christmas Holidays, December 22, 1949—January 2, 1950  
Easter Holidays—Friday through Monday

## SPECIAL DAYS

- Dudley Day—November 2, 1949  
American Education Week—November 7-13, 1949  
Religious Emphasis Week—December 4-7  
Douglas' Birthday and Negro History Week (Joint Observance) Feb. 6-12  
Arbor Day—March 15—(Special Program by School of Agriculture)  
National Negro Health Week—April 2-9  
Morrill's Birthday—April 14—(Special programs by Agricultural and Mechanical Arts Societies)

## COLLEGE PUBLICATIONS

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*The Bulletin of the A. and T. College* published annually as the official catalogue of the College.

*The Bulletin of the A. and T. College Summer Session*, published annually as the official catalogue of the Summer School.

*The Bulletin of the Graduate Division* of the A. and T. College, published annually.

*Annual Pictorial* Issue of the Bulletin.

*The A. and T. College Student Handbook*, published annually for general information and guidance of the students.

*The Register*, the official organ of the student body, published monthly. Edited and managed by the student body under the supervision of the College staff.

*Bulletin* of the A. and T. College, Research Supplement, October, 1944, and August, 1946.

*Bulletin* of the A. and T. College, Non-Collegiate Trade, Vocational and Special Courses.

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# REGULATIONS

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## NOTE ANNOUNCEMENTS—IMPORTANT TO EVERY STUDENT

1. **Vaccinations.**—Each student is required to be vaccinated on entering unless evidence be presented to satisfy the College Physician that vaccination is unnecessary.

2. **Lodging Deposits.**—Students should reserve rooms far in advance of the time of arrival by paying the room deposit of five dollars, which will later be credited to their account upon presentation of receipt. If for any reason a student fails to register the lodging deposit will be refunded provided application for same is made within ninety days after the appointed day of registration. If application is not made within that time the deposit will be forfeited.

3. **Examinations.**—Entrance examinations and examinations for removal of conditions will be held September 15. All students who have to remove conditions should avail themselves of this opportunity.

4. **Boarding Students.**—All students who room on the campus must take meals in a college cafeteria.

5. **Non-Resident Students.**—Students whose legal residence is not in Greensboro will not be permitted to board and lodge off the campus unless they have special permission or unless they have employment that requires them to live on the premises.

6. **Fraternity Houses.**—The College will not permit fraternities, sororities or other groups to establish “houses” off the campus.

7. **Student Load.**—Each regularly classified student will be required to register for 14 hours of work as a minimum. The maximum shall be 19 hours except as provided for by exceptional scholarship. Students carrying a normal load in regular classes will not be permitted to register for credit in evening or extension classes.

8. **Changes in Schedule.**—Students have one week from the beginning of each quarter in which to make adjustments in their schedule. After this time no changes will be permitted except

by written permission of the Dean of the particular school. The Registrar will then recall the class card and discharge the student from the class.

No student will be allowed credit for courses added to his schedule without permission after it has been approved, and any student illegally dropping a course for which he has been registered will be assigned the grade "F" at the end of the quarter.

**9. Attendance.**—Students will be required to attend scheduled assemblies, vespers and the regular exercises of the courses for which they are registered.

**10. Deportment.**—Any student who manifests unwillingness to conform to the rules and regulations that are prescribed, or that may be prescribed to govern the student body, or any student whose influence or deportment seems detrimental to the best interests of the school will be asked to withdraw from the institution.

A student automatically forfeits his privilege of working for pay at the College when, for any reason, he is placed on probation because of misconduct.

**11. Scholarship.**—Students will be expected to do a passing grade of work at all times. Students failing to attain a "C" average in any quarter will be placed on probation the following quarter. Unless definite improvement is made while on probation, the student may be asked to withdraw.

**12. Honor Roll.**—To encourage scholarship and integrity, the College publishes an Honor Roll at the end of each quarter. Regular students whose average grade in all courses is "B" shall be eligible for the Honor Roll. Those students whose grade point average is 2.5 each quarter for three consecutive quarters shall be eligible for an Alumni Scholarship.

**13. Disciplinary Suspension.**—All students, except bona fide residents of Greensboro, are required to leave the campus and the city within forty-eight hours after disciplinary suspension. Permission to re-enter the College will not be granted if this regulation is violated.

**14. Withdrawal from College.**—Students who for any reason find it necessary to withdraw from College before the scheduled termination of the school year should file an official withdrawal

with the Bursar. Forms for this purpose may be secured in the office of the Registrar. Students should have these forms signed by the designated officials and filed before leaving the campus.

All accruing accounts and obligations against such students will terminate on date of filing withdrawal notice. Accruing accounts will continue against those failing to file notice of withdrawal.

**15. Extracurricular Activities.**—Each student shall be encouraged to participate in some (one) extracurricular activity, upon which he shall be graded with regards to excellence. Special consideration will be allowed students who bring their band or orchestra instruments.

**16. Dormitory Provisions.**—The College provides for each student a bed, bureau, study table and straight chair. Students are required to furnish their own curtains, blankets, bed linen, rugs and towels. Electrical appliances, other than those already supplied, are forbidden. Exception: Radios.

**17. Work Students.**—Industries operated at the College afford opportunity for a limited number of needy but industrious students to help themselves by working for the College. This will be at a given rate of pay and accredited to their accounts at the end of each month. It is not possible to state definitely and in advance how much a student may earn per month.

**18. Radios.**—Students who desire radios in their rooms will be required to pay a radio fee of 50 cents per month to cover the cost of current used.

**19. Entrance Fees.**—Each student must pay in cash all entrance fees and expenses for the first month, when he registers. See page -- for complete list of fees and expenses.

**20. Monthly and Quarterly Fees.**—Any student whose bills are not paid on or before the day following the date on which such bills are due will be excluded from all college privileges until such bills are paid.

**21. Late Fees.**—Each registrant will be required to pay one dollar for each day that he is late after the last day assigned for registration.

**22. Medical Examination Fees.**—All regularly enrolled students of the College will be required to take a physical examination upon entrance. The College Physician, or some other physician designated by him, will be in charge of all examinations. Day students will be assessed a small fee to cover this and other emergency services.

**23. Military Science Deposit.**—All students taking military training are required to make a deposit of ten dollars for uniforms. This deposit will be refunded when the uniform is returned in good condition. (All freshmen and sophomores unless excused by the College Physician are required to take military training.)

**24. Final Examinations.**—A final examination will be required as a part of every course. An examination schedule showing time and place of meeting of each course and section will be published quarterly. Schedules so published will be followed without variation in any respect, except by special permission of the dean of the school in which the course is offered.

**25. Teachers' Quarterly Reports.**—Each teacher will be required to file duplicate copies of his final report of grades for each class. These reports showing the name of each student registered in the class and the mark assigned for the quarter together with copies of the final examination questions will be filed, the original in the Registrar's office and the duplicate in the office of the dean of the appropriate school, on or before the scheduled date for such reports. Teachers are cautioned to see that the name of every student assigned to their classes appears on the class roster with a mark correctly assigned. After marks have been filed in the Registrar's office, teachers cannot change them except by petition to the Administrative Council.

**26. Teachers' Daily Reports.**—Teachers are required to file in the office of the Registrar a report of their classes and other official activities daily. This report should show among other things the number of classes scheduled, the classes taught, the number of students present and absent and a list of those absent. This report must be filed at the end of each teaching day.

**27. Registration of Motor Vehicles.**—The college discourages students owning motor vehicles of any type, but all who own or operate cars must have them registered with the college. The registration fee is one dollar per year and is payable at the time of registration.

## SCHEDULE OF ENTRANCE EXAMINATIONS

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(For graduates of non-standard high schools or those who do not present an acceptable certificate of admission)

**Wednesday, September 14:**

**History**—(Ancient, Medieval, Modern, American), civics: 8:00 to 10:00 a.m.

**English**—(Composition, English and American literature), industries, French: 10:00 a.m. to 12:00 m.

**Mathematics**—(Algebra, general mathematics, chemistry, biological sciences): 1:00 to 3:00 p.m.

### VETERANS ADMINISTRATION GUIDANCE CENTER

Of special interest to entering and returning veterans of World War II, is the fact that A. & T. College operates, in conjunction with the United States Veterans Administration, a facility known as the *Veterans Administration Guidance Center*. This Center is excellently equipped to serve both disabled and non-disabled veterans in respect to (1) *Educational and Vocational opportunities* (2) *making the best possible use of skills, aptitudes, abilities and talents* with financial help afforded by the Government in connection with Public Laws 16 and 346, 78th Congress.

Adequate appraisal and psychometric facilities have been established by the College. Veterans are invited to make use of these excellent facilities at no personal expense—if possible, prior to applying for admittance.



**BOARD OF TRUSTEES  
THE  
AGRICULTURAL AND TECHNICAL COLLEGE**

---

**EXECUTIVE COMMITTEE:**

C. A. HINES, *Chairman*

H. A. SCOTT

PIERCE RUCKER

EMMETT BELLAMY.....	Wilmington, N. C.
H. B. CALDWELL.....	Greensboro, N. C.
SHELLEY B. CAVENESS.....	Greensboro, N. C.
GEORGE T. ASHFORD.....	Red Springs, N. C.
CLYDE A. ERWIN.....	Raleigh, N. C.
JOHN J. GREEN.....	Greensboro, N. C.
G. FOSTER HANKINS.....	Lexington, N. C.
C. A. HINES.....	Greensboro, N. C.
J. WILSON ALEXANDER.....	Huntersville, N. C.
L. P. McLENDON.....	Greensboro, N. C.
Z. VANCE BUNTING.....	Bethel, N. C.
GUY B. PHILLIPS.....	Chapel Hill, N. C.
PIERCE RUCKER.....	Greensboro, N. C.
H. A. SCOTT.....	Haw River, N. C.
W. R. VAUGHAN.....	Henderson, N. C.
C. T. WHITTEN.....	High Point, N. C.

# OFFICERS OF ADMINISTRATION AND INSTRUCTION THE AGRICULTURAL AND TECHNICAL COLLEGE

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## Officers of Administration

FERDINAND D. BLUFORD, A.B., B.Ped., D.Ped.	President
C. R. A. CUNNINGHAM, B.S., M.S.	Registrar
WILLIAM H. GAMBLE, B.S.	Dean of Men
WARMOTH T. GIBBS, A.B., Ed.M.	Dean, School of Education and Science
E. RAY HODGIN	Secretary-Treasurer
R. E. JONES, B.S., M.S.	Director, Agricultural Extension
W. L. KENNEDY, B.S., M.S., Ph.D.	Director of Graduate Work
JERALD M. MARTEENA, B.M.E., M.S.	Dean School of Mechanic Arts
JOHN C. McLAUGHLIN, B.S.A., M.S.	Dean, School of Agriculture
ALMA L. MORROW, A.B., B.S. in Lib. Sc.	Librarian
SIDNEY B. SIMMONS, B.S.A.	Director, Vocational Agriculture
SAMUEL C. SMITH, B.S., M.S.	Assistant State Supt. of Trades
JEAN W. SPINNER, B.S., M.S.	Dean of Women
NATHANIEL C. WEBSTER	Bursar

## Associates and Assistants of Administration

WILLIE MAE BROADNAX, B.S.	Assistant Librarian
JOSEPHINE BROWN	File Clerk in Registrar's Office
ROBERT LEE CAMPBELL, D.S.C.	Assistant Dean of Men
ALICE CAMPBELL	Assistant Dean of Women
THELMA COLMAN, B.A.	Dietitian
ALEXANDER CORBETT, B.S.	Director of College Guidance Center for Veterans
MARGARET L. CORBETT, B.S.	House Directress
GENEVA P. CRAWFORD, B.S.	Secretary to Dean, School of Mechanic Arts
CATHERINE DERR, B.S.	Secretary to College Guidance Center
MABEL DeVAUGHN, B.S.	Secretary to Manager of Bookstore
JOSIE COPELAND DOUGLASS, B.S.	Recorder in Registrar's Office
MARY L. DOZIER, B.S.	Assistant Dietitian
BERNICE M. EDWARDS	Secretary to the Secretary-Treasurer
ALLISON GORDON, B.S.	College Postman
ELIZABETH E. GARRETT, B.S.	Assistant in Treasurer's Office
BERNICE HAMMOND	Secretary to Dietitian
GERTRUDE HARDY, R.N.	College Nurse
CARRIE W. HARPER, B.S.	Secretary to the Bursar
DOROTHY M. HINNANT, B.S.	Assistant Dietitian
MARTIN F. HOLT	Superintendent of Farms

BERTHA I. HORNE, B.S.	Assistant Manager of Bookstore
LUCINDA DEAN JACKSON, B.S.	Alumni Secretary
NANCY G. McCLAIN, B.S.	Assistant Bursar
RUTH McDANIEL, B.S.	Secretary to Director of Vocational Agriculture
EUGENE MARROW, B.S.	Assistant Dean of Men
CHESTER H. MARSH	Superintendent of Maintenance
ANNIE R. MASSEY, B.S.	Transcript Recorder, Registrar's Office
ELLEN MASSENBURG, B.S.	Secretary to Librarian
DOROTHY H. MILLER, B.S.	Secretary to the Bursar
T. E. NEAL	Superintendent of Grounds and Buildings
FRANCES OVERSBY, B.S.	Secretary to Supt. of Buildings and Grounds
ANNETTE H. ROBINSON	Secretary to President
LOIS J. SAMUELS, B.S.	Assistant Librarian
EULALIA SMITH, B.S.	Assistant Dean of Women
SAMUEL THOMAS	Assistant Superintendent of Buildings
ALLIE LEE THOMPSON, B.S.	Secretary to Department of Agriculture
HELEN THOMPSON, B.S.	Secretary to the Registrar
MARY L. THOMPSON, B.S.	Assistant Reserve Librarian
CATHERINE TRUESDELL	Secretary to Physical Education Dept.
EDWARD WADDELL, B.S.	Director of Housing Project
THELMA WADDELL, B.S., R.N., M.T.	College Nurse
LUCILLE HOLCOMBE WEBB, B.S.	Secretary to Dean, School of Education and Science
LUCYNDA STEWART WHITE, R.N., C.P.M.N.	College Nurse
AMELIA WILSON, B.S.	Assistant Dietitian
MILDRED WYATT, B.S.	Assistant Registrar

### Officers of Army Instruction

EDWARD C. JOHNSON, Major, Infantry	PMS&T., Commanding Officer
ROGER B. KYLES, Captain, Infantry	Asst. PMS&T
EDWARD E. MITCHELL, Captain, Infantry	Asst. PMS&T
FRED A. MADDOX, WOJG	Adjutant
WALTER ROBINSON, Master Sergeant	Sgt. Major
HECTOR W. HILL, Master Sergeant	Instructor
ALCUS M. McCONDUIT, First Sergeant	Instructor
HENRY S. HARRIS, First Sergeant	Instructor
CLAUDE J. SUTTLE, JR., Sergeant	Maintenance NCO

### Officers of Veterans Administration Guidance Center

B. A. BIANCHI, A.B., M.A.	Chief
JOSEPH A. CHRISTMAS, B.S.C.	Training Officer
MRS. SARAH T. McMILLAN, B.S.	Clerk-Stenographer
MRS. DOROTHY H. BLOUNT, B.S., M.A.	Psychometrist
GEORGE B. MILLER, B.S.	Appraiser



## Officers of Instruction

## PROFESSORS

FERDINAND D. BLUFORD.....1007 Lindsay Street

*President of the College*

A.B., Virginia Union University, 1908; B.Ped., Howard University, 1909; Graduate work Columbia University, 1924; D.Ped., Virginia Union University, 1926. Dean Agricultural and Mechanical College of Alabama, 1909-1910; Professor of Education, Kentucky State College, 1910-1911; Professor of English, St. Paul Normal and Industrial School, 1911-1912; Professor of English, A. and T. College, 1912-1918; Dean, A. and T. College, 1918-1925; Present position since 1925.

LITTLETON ALEXANDER ALSTON.....215 N. Dudley Street

*English*

B.A., Virginia State College, 1939; M.A., *ibid.*, 1940; M.A., Columbia University, 1945; Professional Diploma in Teaching English—Completed residence for Ed.D. in English, *ibid.*, 1946. Principal Elementary School, Stony Creek, Va., 1940-1942; Instructor of English, Sussex County Training School, Waverly, Va., 1942-44. Present position since 1946.

WILLIAM M. BELL.....College Campus

*Coach-Director of Physical Education*

B.A., Ohio State University; M.A., Ohio State University. Assistant Coach, Howard University, 1932-1933; Director of Athletics and Head Coach, Chaffin College, 1934-1935; Director of Physical Education and Head Coach, Florida A. and M. College, 1936-1942; Assistant Director of Physical Training and Coach, Tuskegee Army Air Field, 1944-1945. Present position since 1945.

COLERIDGE ALEXANDER BRAITHWAITE.....2601 E. Market Street

*Director of Music*

A.B., Harvard College, 1939; M.A., *ibid.*, 1941; Instructor in Music, Fisk University, 1940-1941; Further study, 1942. Present position since 1943.

CAROLYN E. CRAWFORD.....College Campus

*Home Economics*

B.S., Columbia University, 1932; M.A., *ibid.*, 1933; Further study, Columbia University, 1945-46. Former position, Instructor Prairie View State College. Present position since 1933.

WARMOTH T. GIBBS.....420 N. Dudley Street

*History and Political Science*

A.B., Harvard University; Ed.M., *ibid.*; Completed one year and a half beyond the Master's Degree, *ibid.*; Professor of History, 1926-1929; Dean, School of Education and Sciences. Present position since 1929.

JASPER BROWN JEFFRIES.....923 Sevier Street

*Physics*

B.S., West Virginia State College, 1933; Graduate Study, University of Illinois, 1935-36; S.M., University of Chicago, 1940. Instructor in Physics, Public Schools, 1933-35. Winston-Salem, N. C.; Instructor in Mathematics, Public Schools, Gary, Indiana, 1941-42; Instructor in Electronics and Microwaves, Army Signal Corps, University of Chicago, 1942-43; Physicist, Atomic Energy Project, University of Chicago, 1943-46. Present position since 1946.

EDWARD C. JOHNSON, MAJ. INF.....121 N. Luther Street

*Military Science and Tactics*

B.S., Health and Physical Education, Wilberforce University, 1934; Graduated from Command and General Staff School, Fort Leavenworth, Kansas; Quartermaster School, Philadelphia, Pa.; Army Information School, Carlisle, Pa.; Served with 366th Inf. Regt. 5 years; 20 months overseas; 3 Battle Stars; Combat Infantryman's Badge; Army commendation Ribbon. Present position since 1946.

WADARAN L. KENNEDY.....A. and T. College Farm

*Dairy Husbandry*

B.S., University of Illinois, 1927; M.S., *ibid.*, 1929; Ph.D., Pennsylvania State College, 1936; Professor of Animal Husbandry, Virginia State College, 1929-1931; Assistant Professor of Animal Husbandry, Langston University, 1931-1933; Graduate Scholar in Dairy Husbandry, The Pennsylvania State College, 1933-1936. Present position since 1936.

R. GRANN LLOYD.....2601 East Market Street

*Economics*

B.S., Tennessee State; M.A., Columbia University; Ph.D., New York University; Former positions, New York City School System, Prairie View College, Elizabeth City State Teachers College, Shaw University, Wiley College. Present position since 1948.

JERALD M. MARTEENA.....1900 Gorrell Street

*Mathematics and Mechanical Engineering*

B.M.E., Ohio State University, 1928; M.S., University of Michigan, 1932; Completed one year and one summer beyond Master's Degree, University of Michigan, 1933; Professor of Mathematics A. and T. College, 1929-1931. Present position since 1933.

JOHN C. McLAUGHLIN.....910 Benbow Road

*Agricultural Economics and Rural Sociology*

B.S.A., A. and T. College, 1931; M.S., Cornell University, 1932; Alcorn A. and M. College, 1932-1937. Present position since 1937.

AKIKI K. NYABONGO.....A. and T. College

*Social Sciences*

B.S., Howard University; 3 years, Yale University; B.Litt., University of Oxford, England; D.Phil., University of Oxford, England. Former positions, Educational Director African Academy of Arts & Research; Chairman of Social Science Department, Alabama State Teachers College; Editor of The African Magazine. Present position since 1947.

WAVERLYN NATHANIEL RICE, JR.....1504 Gorrell Street

*French*

A.B., Morehouse College, 1935; Diplome pour l'enseignement du francais a l'etranger, University of Toulouse, France, 1936; docteur de l'Universite de Toulouse, (Letters), 1937; University of Mexico, Summer, 1939. Present position since 1937.

BOOKER TALIAFERRO WHITE.....106 S. Luther Street

*Chemistry*

B.S., West Virginia State College, 1929; M.S., Ohio State University, 1937; Ph.D., Ohio State University, 1945. Former positions, Kittrell College, 1930-32; Coxie High Sch., Greenvrver, N. C., 1932-36; Brewer Jr. College, Greenwood, S. C., 1937-38; Halifax County Training Sch., Weldon, N. C., 1938-40; Principal Morristown College, 1940-41; State A&M, Normal, Ala., 1945-47. Present position since 1947.

## Associate Professors

ROY HOWARD BROWN.....310 Beech Street

*English-Debating*

B.S., Bluefield State College, 1937; M.A., Ohio State University, 1946. Instructor Kanawha County High School, Charleston, W. Va.; McDowell County High School, Kimball, W. Va. Present position since 1946.

THOMAS ARTHUR CLARKE.....A. and T. College

*Social Studies*

B.S., City College of New York, 1936; M.S. in Education, 1945, *ibid.*; M.A. Columbia University, 1945; Recreation Director Bureau of Recreation Department of Parks, New York City, 1931-43; Marine Captain in International Transportation, Erie Railroad, 1943-45. Present position since 1945.

C. R. A. CUNNINGHAM.....1110 E. Market Street

*Biology*

B.S., University of Illinois, 1929; M.S., *ibid.*, 1930; Instructor, Tennessee State College, 1930-1931; Georgia Normal and Agricultural College, 1931-1934. Present position since 1934.

CLARENCE E. DEAN.....Sedalia, N. C.

*Agricultural Education*

B.S., Hampton Institute, 1924; M.S., Iowa State College, 1930; Berry O'Kelly Training School. 1926-1930. Present position since 1930.

ROGER B. KYLES, CAPT.-----A. & T. College Campus

*Military Science*

A.B., Howard University; Further Study toward M.S., Howard University. Clerk Government Printing Office, Washington, D. C., Instructor of Mathematics, Jr. High School, Washington, D. C., Captain, U. S. Army. Present position since 1946.

ALMA I. MORROW-----1001 Lindsay Street

*Librarian*

B.S. in Library Science, Hampton Institute; A.B., Howard University; Graduate Study, Columbia University.

JOHN B. MURPHY-----501 Bennett Street

*Agronomy*

B.S., Prairie View College; M.S., Kansas State College. Instructor in Rural War Training, Prairie View College and at Nacogdoches, Texas; Teacher, Vocational Agriculture, Yoakum, Texas; County Agricultural Agent, Bellville, Austin County, Texas. Present position since 1946.

H. CLINTON TAYLOR-----807 Logan Street

*Fine Arts*

B.F.A., Syracuse University, 1927; M.A., Columbia University; Further Graduate study, Columbia University, 1935. Present position since 1927.

ARTHUR SYLVESTER TOTTEN-----A. and T. College Farm

*Poultry*

B.S., West Virginia State College; M.S., Michigan State College. Instructor poultry two years, Princess Ann College; Instructor, Southern University one year. Present position since 1946.

LLEWELLYN ADDISON WISE-----422 N. Dudley Street

*Business*

B.S.C., New York University, 1928; M.A., Atlanta University, 1934. Membership in: American Association of Collegiate Registrars; American Academy of Political and Social Science; Association of Deans and Registrars of Negro Schools; N. C. Negro Teachers Association; Southern Business Education Association; National Business Teachers Association and National Negro Business League. Present position since 1928.

RALPH L. WOODEN-----432 N. Dndley Street

*Industrial Education*

B.S., A. and T. College; Professional Teaching Diploma, Specialist School, U. S. Army Air Force Technical Training School; M.A., Ohio State University; Graduate work toward Ph.D., ibid. Former positions: Instructor, North Street High School, Hagerstown, Md., 1938-39; Dudley High School, Greensboro, N. C., 1940-41; U. S. Army Ground School Instructor, Chanute Field, Illinois, Seymour-Johnson Field, N. C., Rome Army Air Field, New York, U. S. Army, 1941-45. Present position since 1947.

## Assistant Professors

PEARL G. BRADLEY-----1425 E. Market Street

*English and Dramatics*

B.S., Agricultural and Technical College, 1939; M.A., University of Michigan, 1944; Instructor of English, J. B. Dudley High School. Present position since 1945.

TALMAGE BREWER-----200 Raleigh Street

*Agronomy*

B.S., Prairie View College, 1946; M.S., Michigan State College, 1947. Present position since 1948.

HERMAN BROWN-----1402 Washington Street

*Psychology*

B.S., Morgan State College; M.A., University of Michigan.

GRAINGER BROWNING-----A. and T. College

*Sociology*

A.B., Shaw University; M.A., Boston University. Former positions, Director of Boy's Work, Cambridge Community Center, Cambridge, Mass., 1944-47. Present position since 1947.

LEADIE M. CLARK-----Holland Hall, A. and T. College

*English*

B.A., University of Illinois; M.A., University of Illinois. Former position Clark College, Atlanta, Georgia, 1945-47. Present position since 1947.

- WILBUR S. CLARKE.....403 N. Dudley Street  
*Education*  
 B.S., Morgan State College; M.A., New York University. Former positions, Teacher in High School System of Washington, D. C., German Code Interpreter for United States Military Intelligence, Arlington, Va. Present position since 1948.
- JAMES F. DAWKINS.....900 Lindsay Street  
*Cabinet Making*  
 B.S., A. and T. College; M.S., University of Pennsylvania. Present position since 1948.
- GEORGE FRANKLIN DAVID, III.....1103 Logan Street  
*Military Science*  
 B.S., Wilberforce University, 1943. Further study, University of St. Andrews, Scotland, 1945. Present position since 1948.
- CHARLES C. DEAN.....144 Mitchell Street  
*Reference Librarian*  
 B.S., A. and T. College; B.L.S., University of Wisconsin, 1940-41; Further study, New York University, 1946. Former position, Assistant to Registrar, A. and T. College, 1942-45. Present position since 1946.
- GWENDOLYN TUBBS DICKSON.....College Campus  
*Business Administration*  
 A.B., Samuel Huston College; M.C.S., Boston University. Secretary to President, Samuel Huston College, 1939-42; Bursar-Business Manager, Samuel Huston College, 1942-45; Instructor of Commercial Education, St. Philip's Jr. College, Summer 1946. Present position since 1946.
- RUDOLPH GRANDY.....A. and T. College  
*Biological Sciences*  
 B.S., A. and T. College; Cornell University, further study; Instructor in Horticulture, Southern University, Scotlandville, La. Present position since 1942.
- JAMES E. HARRISON, JR.....1007 Benbow Road  
*Education*  
 A.B. in Education, Howard University; M.A., Catholic University of America; Teacher in Cheltenham School for Boys, Cheltenham, Md., 1935-1940; Acting Principal 1939-40; Property and Supply Clerk, U. S. Navy Yard, Wash., D. C., 1940-1946. Present position since 1947.
- CARRYE V. HILL.....141 Beech Street  
*English*  
 B.S., A. and T. College; M.A., University of Pennsylvania; Further study at New York University. Present position since 1939.
- DELORES L. HINES.....914 Sevier Street  
*Physical Education*  
 B.S., Virginia State College; M.S., University of Michigan. Former positions: Visiting Physical Education Instructor, Wilson, North Carolina Public Schools; Physical Education Instructor, Fayetteville State Teachers College, Prairie View College, Dudley High School; Health Consultant N. C. State Department of Public Instruction.
- H. DAPHNE LLOYD.....2601 East Market Street  
*English*  
 A.B., Prairie View College; M.A., Columbia University; Further study, New York University; Former positions, New York Public School System and Wiley College. Present position since 1948.
- JUAN F. LOPEZ.....2601 East Market Street  
*Art*  
 B.A.F.A., Xavier University; B.S., Teachers College, Columbia University; M.A., *ibid.*; Further study, New York University. Former positions, Arts and Crafts Director, New York City Mission Society; Staff Artist, New York Botanical Gardens; Art Instructor, Benjamin Franklin High School, New York.
- FRED A. MADDOX, WARRANT OFFICER.....A. and T. College  
*Military Service*  
 Present position since 1946.



CLEO MILAN McCOY.....115 Obermeyer Street

*Religious Education*

B.A., Paine College, 1939; B.D., School of Religion, Howard University, 1942. Interne Chaplain, National Training School for Boys, Washington, D. C., 1940; Qualifications Examiner, United States Civil Service Commission, Washington, D. C., 1943-45; Personal Technician, Treasury Department, Bureau of the Public Debt, New York Regional Office, New York City, 1946. Present position since 1946.

PERCY McWAIN.....731 Julian Street

*Chemistry*

A.B., Ohio State University; M.A., *ibid.*; Former positions, Atmospheric Nitrogen Corp., Ironton, Ohio; Research Assltant, Ohio State University Research Foundation. Present position since 1948.

PATRICIA CONSTANCE McWHORTER.....Annie Holland Hall

*Reserve Librarian*

B.A., Spelman College; B.S. Lib. Sc., Hampton Institute; Former positions, Librarian, Hubbard Training School, Forsyth, Georgia, Carnegie Library, Evansville, Indiana, Army Librarian, Camp Campbell, Kentucky. Present position since 1948.

NETTIE M. NASH.....420 Boyd Street

*Director of Nursery School*

B.S., Bennett College; M.A., Columbia University. Present position since.

JAMES PENDERGRAST.....2601 E. Market Street

*Chemistry*

B.S., A. and T. College, 1939; M.S., Howard University, 1942; A. and T. College 1941-42; Southern University, 1942-45. Present position since 1945.

KATRINA M. PORCHER.....College Campus

*Home Economics*

B.S., Hampton Institute, 1941; Montclair, N. J. State Teachers College, summer; M.A., Columbia University, 1946. Former positions, Holloway High School, Murfreesboro, Tenn., Williston Industrial School, Wilmington, N. C. Present position since 1947.

CHARLES M. POWELL.....1012 Benbow Road

*Industrial Education*

B.S., A. and T. College; M.A., New York University; Former positions, Instructor of Industrial Arts at Whiteville High School, Statistician at Harlem Y.M.C.A., New York; U. S. Army Section Construction Foreman. Present position since 1948.

JAMES HOLT REEVES, JR.....416 Beech Street

*English and Sociology*

B.S., A. and T. College; Master of Arts, Boston University. Former positions, A. and T. College, April-June, 1946. Present position since 1947.

BROADUS E. SAWYER.....A. and T. College

*Business Administration*

B.S., A. and T. College; M.B.A., University of Pennsylvania. Former position, Teacher at A and T. College Spring and Summer of 1946. Present position since 1948.

BOOKER TALLIFERO SIMPSON.....1313 Gorrell Street

*Chemistry*

B.S., Claflin College; M.S., State University of Iowa; Former positions, Teacher of Chemistry and Mathematics, High School, Anderson, South Carolina, 1935-39; Teacher of Chemistry and Mathematics, Lancaster, South Carolina, 1942; Teacher of Mathematics, Hampton, Virginia (High School) 1942. Present position since 1948.

WILLIAM SPIGENER.....632 Ashe Street

*Biology*

B.S., Lincoln University; M.S., Catholic University of America. Statistician, War Department. Present position since 1946.

CALVIN R. STEVENSON.....403 North Dudley Street

*Psychology*

B.S., Teachers College, Columbia University; M.A., *ibid.*; Former positions, Elementary Teacher, Baltimore, Maryland, Technical Instructor, U. S. Army, Ass't. Detach. Comd., Med. Dept. U. S. Army. Present position since 1948

RICHARD ARTHUR THORNHILL.....A. and T. College Campus

*Zoology*

B.S., Virginia Union University; A.M., Montclair, N. J., State Teachers College. Principal, Oak Hill High School, Virginia; Instructor Trainer, U. S. Army. Present position since 1946.

ALFRED C. TYLER.....1709 Lindsay Street

*Radio Servicing*

B.A., Morehouse, 1932; M.A., Columbia University, 1941; Certificate of Proficiency in Television, Technical School, Temple University. Instructor in Algebra & Physics, Sterling High Sch., 1933-40; Principal, Sterling High Sch., Sheffield, Ala., 1940-43.

CHARLES RUSSELL WYRICK.....1606 East Market Street

*English*

B.S., A. and T. College; M.A., New York University; Former positions, Instructor Ammunition School, Aberdeen, Maryland. Present position since 1948.

**Instructors**

ISAAC BARNETT.....200 Raleigh Street

*Automobile Mechanics*

B.S., A. and T. College. Night class instructor at Wm. Penn High Sch., High Point, N. C., 1946-47. Present position since 1947.

NANCY LEWIS BECKWITH.....1211 Gorrell Street

*Tailoring*

B.S., N. C. State College; Certificate, Pratt Institute. Instructor, Home Economics, Johnston County Training Sch., Smithfield, N. C., 1941-42; Instructor, Home Economics, History, Social Studies, Redstone Academy, 1942-45, Lumberton, N. C., Dressmaking & Tailoring Shop, Portsmouth, Va., 1945-47. Present position since 1947.

W. ARCHIE BLOUNT.....1421 E. Market Street

*Horticulture*

B.S., A. and T. College, 1939; Further study, Hampton Institute, 1941. Instructor Vocational Agriculture, Robert Moton H.S., Westminster, Md., 1940-42; Captain MAC AVS, 1946; Agricultural Vocational Appraiser A. & T. College Veterans Guidance Center, 1946. Present position since 1947.

LELIA W. BRAITHWAITE.....2601 E. Market Street

*Nursery Education*

B.S., A. and T. College. Present position since 1948.

MATTHEW BROWN.....A. and T. College

*Physical Education*

Attended Ohio State University. Present position since 1948.

NATHAN E. BROWN.....815 English Street

*Carpentry*

B.S., A. and T. College. High school Vocational teacher for 6 years. Present position since 1947.

WENDELL M. BRYANT.....809 E. Bragg Street

*English*

B.S., Journalism, University of Kansas. Former position, Telegraph Editor of the "Kansas" and feature writer of the "Daily World" in Lawrence, Kansas. Present position since 1948.

G. L. BURGE.....1719 McConnell Road

*Bricklaying*

- C. L. CANNON.....1402 McCornell Street  
*Laundry Management*  
 B.S., Alcorn A. & M. College. Present position since 1946.
- JOHN CARLSON.....A. and T. College  
*Auto Mechanics*  
 B.S., A. and T. College.
- WALTER F. CARLSON, JR.....1501 Lindsay Street  
*Band Music*  
 B.S., A. and T. College; further study, University of Michigan, 1948. Present position since 1946.
- ETHBERT S. CARR.....1527 McConnell Road  
*Agronomy*  
 Hampton Institute; B.S. in Agriculture, Ohio State. Instructor at Prairie View State College. Present position since 1945.
- ELIZABETH W. CLARK.....2601 East Market Street  
*Chemistry*  
 B.S., A. and T. College, attended City College of N. Y., Hunter College, N. Y.; Former position, Medical Pathological Technician, Harlem Hospital, N. Y.; Playground Director, New York City. Present position since 1948.
- MARQUIS L. COUSINS.....409 N. Dudley Street  
*Automobile Mechanics*  
 Certificate in Auto Mechanics, A. and T. College. Instructor of auto. mech. in U. S. Army for 2 years. One year at General Motors School, Detroit, Mich. Present position since 1947.
- CHARLES C. DAVIS.....A. and T. College  
*Mathematics*  
 B.S.-E.E., Howard University. Present position since 1946.
- CLYDE DEHUGULEY.....360 West Bragg Street  
*Shoe Repairing, Leather Works*  
 Graduate Tuskegee Institute, 1922; Instructor in shoe repairing, Kentucky State College, 1922-24. Present position since 1924.
- ORAN KAY DORSETT.....219 Gant Street  
*Tailoring*  
 Certificate, A. and T. College, 1947. Present position since 1947.
- JOSEPH GRADY ECHOLS.....A. and T. College  
*Physical Education*  
 B.S., Virginia State College; Further study, New York University; Former positions, Kentucky State College Instructor in Physical Education, Coach Football, Basketball and Boxing. Present Position since 1948.
- W. J. FISHER.....Rt. 2, Box 44, Burlington, N. C.  
*Rural Engineering*  
 B.S., A. and T. College; Further study, ibid.
- WILLIAM H. FOUST.....119 Landreth Street  
*Bricklaying, Cement Construction*  
 Attended Trade School, A. and T. College, 1931; General Contractor, 1936-41; Foreman of Walk's Real Estate Company, Washington, D. C., 1941-42; Worked on Defense Projects. Present position since 1944.
- WILLIAM H. GAMBLE.....2601 E. Market Street  
*Education*  
 B.S., A. and T. College, 1938; Further study, University of Pittsburgh and Columbia University. Assistant to the Registrar, A. and T. College, 1938-40; Dean of Men and Instructor of Education. Present position since 1940.

E. R. GARRETT.....901 Lindsay Street

*English*

A.B., Tougaloo College, 1905; Summer Work, University of Wisconsin, 1921; Graduate work at University of Iowa, 1928. Instructor of Mathematics, Campbell College, Jackson, Miss., 1911-1913; Trade Teacher and Instructor in English, 1913-18; Assistant Professor of English, 1918-1920; Teacher Trainer, Trades and Industrial Education, 1920-1922; Alcorn A. & M. College; Teacher Trainer, Trades and Industrial Education, 1922-1930, A. and T. College; Superintendent Memorial Industrial School, 1932-1946. Present position since 1947.

\*GERARD E. GRAY.....College Campus

*Engineering Drawing and Mathematics*

B.S., Architectural Engineering, A. and T. College, 1942. Present position since 1946.

HENRY S. HARRIS, 1ST SGT., ROTC.....A. and T. College

*Military Science*

Tuskegee Institute; Continuous service in the United States Army, 17 years; Served with U. S. Tenth Cavalry, 12 years. Present position since 1946.

FLORENCE L. HENDERSON.....2601 East Market Street

*Music*

B.A., Knoxville College; Further study, Columbia University; Former positions: Instructor in the Public School System in North Carolina. Present position since 1948.

FRANK HENDERSON.....2601 East Market Street

*Zoology*

B.S., Knoxville College; M.A., New York University; Former position, Delaware State College. Present position since 1948.

HERBERT M. HEUGHAN.....200 Raleigh Street

*Mathematics*

B.S., Hampton Institute; Further study, University of Maine; Former positions, Hampton Institute, M.N.S. High School, Accomac, Virginia, Extension Teacher, Virginia State College. Present position since 1948.

HECTOR W. HILL, M/SGT.....2601 E. Marget Street

*Military Science*

Columbia University. Former positions: Chief Warrant Officer, U. S. Army. Served overseas as Commanding Officer and Bandleader with 92nd Infantry Division Band. Present position since 1946.

MAJOR B. HOLLOWAY.....1145 Gorrell Street

*Auto Mechanics*

Certificate, A. and T. College, 1940; Instructor Mechanics School United States Army 1941-45. Present position since 1945.

FLORENCE B. IRVING.....A. and T. College

*Business Administration*

A.B., Spellman; M.B.A., University of Chicago.

GARDENIA JOHNSON.....425 Bennett Street

*Physical Education*

B.S., A. and T. College. Present position since 1948.

GERTRUDE A. JOHNSON.....506 Logan Street

*English*

A.B., Shaw University. Further study at Upsala College, A. and T. College.

RICHARD L. JOHNSON.....912 High Street

*Mathematics*

Lutheran College, 1939-41; B.S. in Mech. Engr., A. and T. College. Further study Armed Forces University of the Pacific, Okinawa, 1945-46.

\*Absent for further study 1948-49.



- MALCOLM W. JOHNSON, JR.-----1505 Lindsay Street  
*American History*  
 A.B., Morgan State College; Further graduate study, Catholic University; Former positions, Instructor for U. S. Army; High School Teacher in Maryland School System. Present position since 1948.
- \*CLINTON E. JONES-----215 North Dudley Street  
*Physics-Mathematics*  
 B.S., A. and T. College. A. and T. College, 1943; Hampton Institute, Department of Physics, 1943-44. Present position since 1946.
- DAISYBELLE JONES-----1119 Benbow Road  
*English*  
 A.B., Virginia State College; M.S.W., Atlanta University; Teacher, public schools, Lynchburg, Va. Present position since 1947.
- THOMAS B. JONES-----Campus  
*Mechanical Drawing*  
 B.S., A. and T. College.
- EDYTHE M. KING-----800 East Lee Street  
*Mathematics*  
 A.B., Paine College. University of Michigan, Summer 1939; Atlanta School of Social Work, summers 1945-47. Former positions: A. & T. Library, 1945-46, Butler High School, Hartsville, S. C., 1946-47. Present position since 1947.
- PAUL E. LEACRAFT-----106 Shaw Street  
*Mathematics*  
 B.S., A. and T. College, 1941; High School Instructor, 1941-42; 1st Lt. C.W.S. Present position since 1946.
- \*WILLIAM L. LEWIS-----949 East Washington Street  
*Industrial Arts*  
 B.S., Industrial Arts, Tuskegee Institute; M.A., University of Chicago, further study University of Chicago. Supervisor of Patternmaking and Joinery, Alabama A. and M. College, N.Y.A., 1942; precision machinist, Western Electric Company, Chicago, Illinois, 1943-44; visual aids teacher, University of Chicago Laboratory School, 1946-47. Present position since 1947.
- HARDY LISTON, JR.-----1308 E. Fourth St., Winston-Salem, N. C.  
*Mechanical Engineering*  
 Knoxville College, 1936-39; B.S. in M.E., 1943, Howard University. Assistant Ordnance Engineer, Navy Department, Washington, D. C., 1943-46. Present position since 1946.
- SHERMA HOUGH LOWE-----131 N. Dudley Street  
*Physical Education*  
 B.A., Talladega College; Further study, University of Mexico; Dunham School of Dance 2 years). Former positions, Dance Instructor, Virginia State College.
- LORENO MEBANE MARROW-----A. and T. College  
*English*  
 B.S., A. and T. College. Present position since 1948.
- WALLACE L. MITCHELL-----422 N. Dudley Street  
*Carpentry*  
 B.S., Shaw University, 1931; B.S., A. and T. College, 1935. Present position since 1935.
- EDWINA T. MURPHY-----501 Bennett Street  
*English-Spanish*  
 A.B., Fisk University; Further study, Columbia University. Anderson High School, Austin, Texas; Tillotson College, Austin, Texas; Summer High School, Kansas City, Kansas. Present position since 1946.

- ALCUS M. McCONDUIT, 1ST SGT.-----A. and T. College  
*Military Science*  
 B.A., Xavier University. Former position, Social Worker and Instructor. Present position since 1946.
- JAMES THOMAS NORRIS, JR.-----809 King Street  
*Automobile Mechanics*  
 Certificate, A. and T. College. Teaching night school at Wm. Penn High School, High Point. Present position since 1947.
- LOUISE M. E. NIXON-----A. and T. College  
*Mathematics*  
 B.S., A. and T. College. Math. & Science teacher, Willis Hare High School, Pendleton, N. C.; Math. teacher, Dudley High School, Greensboro. Present position since 1947.
- ROBERT S. POOLE-----College Campus  
*Tailoring and Designing*  
 Hampton Institute, 1911; Mitchell School of Designing, 1916; Instructor, Edward Waters Institute, 1917-1920. Business, 1920-1926. Further study, summer school, Hampton Institute, 1931. Further study in dry cleaning, Hampton Institute summer 1940. Present position since 1926.
- MARY ANNE ROBINSON-----Annie Holland Hall  
*Clothing*  
 B.S., Wilberforce University. Former positions, Teacher in Public School, Dayton, Ohio. Present position since 1948.
- ARMAND RICHARDSON-----421 Bennett Street  
*Electrical Engineering*  
 B.S., E.E., University of Pittsburgh. Present position since 1947.
- CLEMENT B. SMITH-----A. and T. College  
*Dry Cleaning*  
 National Association of Dry Cleaning Institute.
- DAVID G. SPELLER-----213 Marshall Street  
*Tailoring*  
 Certificate, A. and T. College, 1936; Business, 1938-1939; Religious Director, Hayes-Taylor Memorial Y. M. C. A., Greensboro, N. C., 1939-1941; Acting Pastor New Zion Baptist Church, Greensboro, N. C., 1941; Assistant Pastor, Ebenezer Baptist Church, Portsmouth, Va., Summer, 1942; Acting Pastor, First Congregational Church, Greensboro, N. C., 1943; Assistant Instructor in Tailoring, A. and T. College since 1940. Present position since 1941.
- DOROTHY B. SIMMONS-----906 Julian Street  
*Secretarial Science*  
 B.S., A. and T. College. Present position since 1948.
- IDA B. SPIGENER-----632 Ashe Street  
*English*  
 A.B., Spelman College; M.A., Howard University; Former positions, Miles College, Birmingham, Alabama. Present position since 1948.
- VEDA J. STROUD-----1425 East Market Street  
*Business Administration*  
 B.S., A. and T. College; Secretary to the Dean of the School of Education and Sciences, A. and T. College, 1939-1940; M.A., Columbia University, 1947. Present position since 1942.

VIRGIL C. STROUD.....1425 East Market Street

*History*

B.S., A. and T. College; Graduate study, ibld.; Former positions, Instructor, Florence High School, High Point, North Carolina, VA appraiser, A. and T. College Veterans Guidance Center. Present position since.

ABRAM TAYLOR.....425 Bennett Street

*Physical Education*

B.S., A. and T. College; Graduate work, University of Minnesota.

KATHRYN R. TYLER.....1709 Lindsay Street

*English*

A.B., Knoxville College; M.A., Atlanta University; M.Sc., Western Reserve University. Former positions, Instructor, Albany State College, Albany, Ga., and St. Phillips Junior College, San Antonio, Texas. Present position since 1948.

LATHAM WALLACE.....122 Regan Street

*Shoe Repairing*

Certificate, A. and T. College, 1946; B.S., A. and T. College, 1947. Present position since 1947.

H. E. WEBB, JR.....2601 E. Market Street

*Electrical Engineering*

B.S., Electrical Engineering, A. and T. College. Graduate study, New York University. Present position since 1947.

\*AURELIA ELIZABETH WIGGINNS.....116 Laurel Street

*Home Economics*

B.S., Hampton Institute, 1945; 1 year graduate study, Cornell University. Home Demonstration Agent, Wake County, Raleigh, N. C., 1945-46. Present position since 1946.

J. E. WILKINS.....Campus

*Bricklaying*

ANDREW W. WILLIAMS.....A. and T. College Campus

*Machine Shop Practice*

Certificate, Machinist Trade School, Chicago, 1943; A. and T. College, 1946. Instructor in Machine Shop Practice, U. S. Navy, 1943-45; Industry, 1943. Present position since 1946.

GEORGE E. WILLIAMS.....200 Raleigh Street

*Fine Arts*

B.F.A., University of Denver. Present position since 1948.

HOWARD C. WILLIAMS.....A. and T. College

*Rural Sociology and Economics*

B.S.A., Georgia State College; M.S., Ohio State University. Present position since 1942.

RAYMOND P. WILLIAMS.....1204 Kivett Drive, High Point, N. C.

*Welding*

1940-41, A. and T. College Vocational School of Carpentry; 1943, Washington State Vocational School of Welding, Certified by "American Bureau of Shipping Surveyor," 1943. Head of Industrial Arts, 229 CCC Fort Bragg, N. C., 1935-36; Instructor of Industrial Arts, Palmer Memorial Institute, 1937-38; Recreational Leader in Greensboro, High Point, Burlington and Sedalia, N. C., 1938-40; National Defense Work during War, Philadelphia Navy Yard, Philadelphia, Pa. Present position since 1945.

\*Absent for further study, 1948-49.

## State Agricultural Extension Service Personnel

R. E. JONES, B.S., M.S.	State Extension Agent
J. W. JEFFRIES, B.S.	Assistant State Extension Agent
OTIS BUFFALOE, B.S.	District Farm Agent
JOHN A. SPAULDING, B.S.A.	District Farm Agent
MRS. DAZELLE F. LOWE, B.S.	District Home Agent
MISS WILHELMINA R. LAWS, B.S.	District Home Agent
MRS. RUBY C. CARRAWAY, B.S.	District Home Agent
WILLIAM C. COOPER, B.S.	State 4-H Club Specialist
ROBERT LOUIS WYNN, B.S., M.S.	Extension Dairy Specialist
MISS GENEVIEVE M. KYER, B.S., M.S.	Subject Matter Specialist, Clothing and Home Management
MRS. BESSIE B. RAMSEUR, B.S., M.A.	Subject Matter Specialist Foods and Nutrition
H. BLANCHE STEPHENS, Diploma	Secretary to State Agent and State 4-H Club Specialist
MRS. HAZEL R. MITCHELL, Certificate	Secretary to Extension Supervisors
MAE ALICE McMILLAN BROWN, B.S.	Secretary to Extension Supervisors
B. A. HALL, B.S.A.	County Agent, Guilford County
MRS. ROSA T. WINCHESTER, B.S.	Home Agent, Guilford County

## HISTORY OF THE COLLEGE

The College was established by an act of the General Assembly of North Carolina, ratified March 9, 1891. The object of the institution is declared by the act to be for instruction in practical agriculture, the mechanic arts and such branches of learning as related thereto, not excluding academic and classical instruction.

The citizens of Greensboro donated fourteen acres of land and \$11,000 to be used in the construction of buildings. In 1893 this was supplemented by an appropriation of \$10,000 by the General Assembly. Dudley Hall was completed in 1893 and the school opened in the fall of that year at Greensboro. Previously, it had operated in connection with Shaw University in Raleigh, N. C.

The management and control of the College and the care and preservation of all its property are vested in a Board of Trustees, consisting of sixteen members, who are elected by the General Assembly, or appointed by the Governor, for a term of six years.

The Trustees, by the act of the Legislature, have power to prescribe rules for the operation of the College; to elect the president, instructors, and as many other officers and assistants as they shall deem necessary; and have general and entire supervision of the establishment and maintenance of the College.

The financial support of the College for the payment of salaries and purchase of apparatus and equipment is derived from the United States, under an Act of Congress, known as the Morrill Act, passed August 20, 1890. This act makes an annual appropriation for each State and Territory for the endowment and support of colleges for the benefit of agriculture and mechanic arts, to be applied "only to instruction in agriculture, the mechanic arts, the English language, and the various branches of mathematics, physical, natural, and economic sciences with special reference to their application in the industries of life and the facilities of their instruction."

The College also receives an appropriation from the State for general maintenance, which cannot be provided for under the laws governing the use of Federal appropriations.

The work of the College is carried on through six major divisions or schools. These are the School of Agriculture, the



School of Education and Science, the School of Mechanic Arts, the Trade School, the Summer School and the Graduate School.

The offerings, requirements and objectives of these schools are explained in the pages that follow. Special bulletins on the Trade School, the Graduate School and the Summer School are published by the College. A copy of either may be had on request.

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## THE COLLEGE BUILDINGS

### Dudley Memorial Building

On January 27, 1930, the original Dudley Hall was destroyed by fire. The erection of the New Dudley Hall was undertaken immediately thereafter and on February 15, 1931, it was occupied. This is a fine fireproof structure of three stories, larger than the old building and better suited to meet the needs of a modern college. It contains classrooms, assembly rooms, library, offices for the President, Dean of the School of Education and Sciences, Treasurer, Registrar, Bursar, and other administrative officers.

### Library

The Library occupies the entire second floor of the New Dudley Administration Building. It contains 33,000 volumes and 4,800 pamphlets, and receives 201 current periodicals, representing various departments of the College and 23 newspapers. Books have been carefully selected with a view to facilitating instruction and research.

All students registered in the College are entitled to full reference use of the Library. Subject to certain necessary library rules and regulations, students may withdraw books for home use. The Bursar's receipt, bearing the signature of the student, must be presented as identification.

*Library Hours:* The Library is open Monday through Friday from 8:00 a.m. to 5:00 p.m. and 6:30 to 9:00 p.m. except Saturday, when the hours are from 9:00 a.m. to 12 noon and 1:30 to 4:30 p.m.

### North Dormitory

The North Dormitory is a three-story building which contains rooms for about 70 students.

### **Morrison Hall**

Morrison Hall is a fireproof, three-story building with basement. It contains rooms for 130 students.

### **Annie W. Holland Hall**

Annie W. Holland Hall is a dormitory for women. It was completed in 1938 and is named in honor of Mrs. Annie W. Holland, who for a long period was State Supervisor of Colored Elementary Schools in North Carolina. The building is fireproof and is located in one of the most beautiful sections of the campus. It is constructed to house 155 students.

### **The College Buildings Renamed**

By a special vote of the Board of Trustees in its annual meeting for 1933, the following changes in the names of buildings were made: the Agricultural Building became Noble Hall in recognition of the distinguished services of the late Chairman of the Board of Trustees, Dr. M. C. S. Noble, and the Mechanics Building became Crosby Hall in honor of the first president of the College, Dr. John O. Crosby.

### **Vanstory Hall**

Vanstory Hall, formerly known as the South Dormitory, is a three-story, brick building, which contains rooms for 92 students. The basement is used for storerooms.

### **Noble Hall**

Noble Hall is a fireproof, three-story structure, with basement. It contains laboratories for botany, dairy products, zoology, geology, chemistry and classrooms and offices for the Dean, School of Agriculture, and the heads of divisions.

### **Crosby Hall**

Crosby Hall, one of the few remaining historic buildings on the campus, is a three-story structure. It houses on the ground floor the Department of Masonry, Rural Engineering and the College Post Office. The first floor contains the Department of Business, Dressmaking, and the R.O.T.C. Storeroom. The third floor houses the Departments of Fine Arts, Architecture and Mechanical Drawing.

### **Alexander Graham Hall**

The Alexander Graham Hall is a three-story fireproof structure located near U. S. Highway No. 70. The building was constructed in 1939 with funds appropriated by the State and the Federal Emergency Administration of Public Works and contains the following laboratories and shops: Physics, Photography and Visual Education, and Engineering, Laboratories, Industrial Arts, Auto-Mechanics, Shoe Repairing, Machine Shop Welding, and Carpentry Shops. The office of the Dean of the School of Mechanic Arts is also located in this building.

### **Richard B. Harrison Auditorium**

The Richard B. Harrison Auditorium, completed in 1940, takes its name in honor of the noted actor and teacher who gained world renown as "De Lawd" in the great stage production of 1930, *The Green Pastures*. Previously Richard B. Harrison had been well and favorably known to the students and constituents of the A. and T. College as a teacher of dramatics and public speaking, a position he had held at the College for a number of years and relinquished to accept the part in the play mentioned above.

This auditorium, one of the largest and best equipped of its kind in the State, contains in addition to the main assembly room, special rooms for dramatics, band and music classes, and offices for the music and dramatic departments. It is the center for public programs, religious services and extracurricular activities.

### **The College Gymnasium**

The College Gymnasium is a one-story fireproof structure located on East Market Street, which is United States Highway No. 70, the main thoroughfare connecting eastern and western Carolina. This building is used for physical education classes and extracurricular activities for both men and women. The large seating space and the stage make it possible for this building to be used also as an auditorium for public programs and other civic activities.

### **Murphy Hall**

Murphy Hall is a one-story fireproof building which contains the cafeteria, the kitchen, and the refrigeration plant. The cafeteria has seating capacity for 800 students. It is one of the most beautiful buildings of its kind to be found in the State.



### **Florence Garrett Practice House**

The Florence Garrett House is the new home economics practice house. The building was named in honor of Mrs. Florence Garrett who was among the first women students to attend the College, and who bequeathed her small estate to the College as a beginning of an endowment. The Practice House is a two-story brick structure, conveniently located and adequately constructed to meet the needs of the home economics students.

### **Power Plant**

A new central heating and power plant has recently been installed containing boiler capacity of 330 horsepower and affords the students of mechanical engineering the opportunity of practical experience in boiler-room operation and management. Attached to the power plant is a modern steam laundry containing modern equipment.

NOTE: Other equipment and buildings are described in special sections dealing with the Schools of Agriculture.

### **North Campus**

In the fall of 1946, the College was successful in purchasing the military hospital area of the local army overseas Replacement Depot. This plot comprises about fifty-two acres of improved land and is one block north of the main campus.

This new area has been designated the North Campus. Some of the buildings are being used for dormitories for men, some for class rooms and others for shops for trade and vocational classes. Physical Education classes for men are held in the recreation hall, and dining halls are run for the use of the students lodging on north campus.

The army administration headquarters have been converted into offices for the Veterans Administration Guidance Center and for the college guidance center.

### **Temporary Housing**

In 1946, the College was allotted seventy-two temporary housing units for the accommodation of married veterans. These units have been erected and are now occupied by married veterans enrolled at the college.

A dormitory containing space for one hundred and twenty-eight single veterans has also been allotted by the federal housing authority.

# GENERAL INFORMATION

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## ADMISSION TO COLLEGE

High school graduates may qualify for admission by any one of the following methods:

1. Entrance examination conducted by the College.
2. Examination conducted by the College Entrance Board.
3. Certificate from an accredited high school.

Students who desire admission to the Freshman Class by certificate may show that they have completed fifteen (15) units of high school work as follows:

Six units required from Group I.

As many as ten units may be elected from Group II.

As many as six units may be elected from Group III.

Group I	Required Units	Group II	Electives
1. English .....	3	1. Science (Natural)	
2. Mathematics .....	2	2. Social Science	
3. Social Science .....	1	3. English	
		4. Mathematics	

Group III	Electives
1. Agriculture	
2. Art	
3. Commercial Subjects	
4. Home Economics	
5. Industrial Arts	
6. Music	
7. Mechanics	
8. Foreign Language	

NOTE: Not more than three units from any subject in Group II and two units from any subject in Group III will be accepted in the fifteen (15) units of work.

A unit of work in the above requirements is approximately a fourth of a year's work in a secondary school. It is assumed that study is pursued for four or five periods a week, that the recitation periods are from forty to sixty minutes in length, and that the length of the school year is nine months.

**CLASSIFICATION OF NEW STUDENTS****1. *Freshmen.***

- a. Graduates from high schools will receive entrance rating according to the standing of their respective schools.
- b. If the student is not a graduate of an accredited high school, he must comply with the requirements by examination. Entrance examinations will be held at the College on September 14, 1949.
- c. Every student, irrespective of the method by which he seeks admission, must present to the College through the principal of his former school, a transcript covering his entire record of subjects and grades and a statement including the principal's estimate of his character.

NOTE: All entering Freshmen will be required to take placement tests in English and mathematics. Students registering in the School of Education and Sciences will take placement tests in French if they have two units of French on their high school transcripts. All who fail in the English examination will be assigned to a remedial course in English (English 210). All who fail in the mathematics examination will be assigned to a remedial course in mathematics (Mathematics 309). All who fail in the French tests will take French 211.

**2. *Students of Advanced Standing.***

After transcripts have been received, applications for advanced standing will be passed upon by the admission officer.

All persons who desire to enter the College should make application to the Registrar before the opening of the quarter for which they wish to enroll. Those who desire to be admitted by certificate should apply as soon as possible after graduation from high school. For all applicants the blank form found in the back of the catalogue is sufficient. Early attention to this matter will save the student delay at the opening of the session.

**3. *Special Students.***

In exceptional cases applicants of mature years, of special training along particular lines, or of long experience in specific fields of knowledge, may be admitted to the College to study certain subjects, as special students, even though they cannot satisfy entrance requirements. Such students must do a passing grade of work in each course for which they may be permitted to register, or they will be asked to withdraw from the course.

**CLASSIFICATION OF ADVANCED STUDENTS*****Sophomore—***

To be classified as a sophomore a student must have completed fifty hours of work open to freshmen with at least fifty grade points. As a part or in addition to this, the freshman courses in education, vocations, military science or physical education, and remedial English and mathematics must be completed.

*Junior—*

Before being classified as a junior a student must have completed one hundred quarter hours of work required of sophomores with a similar number of grade points. No student will receive junior classification until all required freshman and sophomore courses have been completed.

*Senior—*

Before gaining senior classification a student must have completed at least one hundred and fifty hours of required and major work with a minimum of one hundred and fifty grade points.

**STUDENT LOAD**

The unit of credit is the quarter hour, which stands for one recitation or two laboratory periods per week for a period of twelve weeks. Each recitation period carries with it approximately two hours of preparation.

Students will generally be required to register for 14 hours of regular work of college credit per quarter, as a minimum.

(a) Students whose general average is "C" may register for not more than minimum of his curriculum.

(b) Students whose average is 2.5 grade points, with no grade below "B" may be permitted to register for not more than 21 hours of work for the quarter following such a record.

**MARKING SYSTEM**

	<i>Grade Points</i>
93-100—A (Excellent) .....	3
82- 92—B (Good) .....	2
71- 81—C (Fair) .....	1
60- 70—D (Poor, but passing) .....	0
Below 60—F (Failure) .....	—1
I (Incomplete)	
W.P. (Withdrew passing)	
W.F. (Withdrew, failing)	

**GRADE POINTS**

The maximum points which a candidate for graduation with minimum hour requirements can make under this system will be 600, the minimum 200; this means that, in order to graduate, a student must make an average of "C".

**REMOVAL OF FAILURES**

At his first opportunity a student must repeat in class a required course in which he has failed, unless the Dean of his School authorizes a suitable substitute course.

**INCOMPLETES**

Students are expected to complete all requirements of their courses during the quarter in which they are registered for them. However, if at the end of the quarter a small portion of work that can be completed without further class attendance, remains unfinished, a mark of "I" will be

reported. To secure credit this deficiency must be removed within one month after the beginning of the succeeding quarter in residence. If not completed within this time the teacher will report a mark of "F" for the course.

Likewise persons doing a passing grade of work who because of no fault of their own fail to take the final examination in a class must complete this deficiency within one month after the beginning of the succeeding quarter in residence or a mark of "F" will be reported by the teacher.

### COURSE NUMBERING SYSTEM

The instruction of the College is administered by five main groups:

The Faculty of the Graduate School.

The Faculty of the School of Agriculture.

The Faculty of the School of Education and Sciences.

The Faculty of the School of Mechanic Arts.

The Faculty of the Vocation School.

The number of each course in the Agricultural School begins with the figure 1; those in the School of Education and Sciences, with the figure 2; those in the Mechanic Arts School, with the figure 3, and those in the Vocational School, with 4.

Each course is designated by a number containing three figures. The first indicates the School in which it is offered; the second (with a few exceptions), its academic classification; and the third, either the quarter in which it is usually given or its serial number.

#### *Examples:*

History 211 is a course offered by the Faculty of the School of Education and Sciences; it is open to freshmen, and is usually offered in the first quarter (Fall Quarter).

Chemistry 111 is a course offered by the Faculty of the School of Agriculture; it is open to freshmen, and it is the first of a series.

Physics 323 is a course offered by the Faculty of the School of Mechanic Arts; it is open to Sophomores, and it is usually given in the third quarter (Spring Quarter).

#### *Exceptions:*

(a) There are some unavoidable exceptions to this system, especially with reference to the second and third figures. Some courses with the middle figure 1 are open to upperclassmen, and there are a few courses with the middle figure 2 open to freshmen. Courses are not in every case given during the quarter indicated by the third figure (where the third figure is meant to indicate the quarter rather than the serial number).

(b) Courses in all Schools open to advanced undergraduates and graduates are numbered 500 plus; strictly graduate courses are numbered 600 plus.

(c) Courses in the Vocational School are numbered 400 plus.



### CREDIT EVALUATION SYSTEM

The credit value of each course is indicated by three numbers. The first represents the full credit value in quarter hours, the second, the number of recitations per week, and the third, the number of hours spent in the laboratory each week. For example: French 211, Credit 5(5-0) means that this course carries 5 hours credit, and is conducted by lecture or recitation 5 times per week with no assigned laboratory; while Chemistry 112, Credit 5(3-4) carries 5 hours credit, 3 hours being devoted to lecture or recitation and 4 spent in the laboratory. Two hours in the laboratory are required for 1 hour of credit.

### GENERAL GRADUATION REGULATIONS

(See special graduation requirements for each School—see Pages 49, 55, 57, 63)

Graduation from the A. and T. College involves the satisfaction of the following requirements:

1. The candidate for a degree must have selected a specific curriculum, having the approval of the Dean of the School in which he is registered. This curriculum must be completed.

2. Whether registered in Agriculture, Education and Sciences or Mechanic Arts, he must complete at least 200 quarter hours and 200 grade points.

3. The credit hours must aggregate at least 200, including the required courses in military science and physical education. The grade points must equal 1 times the number of credit hours undertaken, whether passed or failed. If after securing 200 credit hours the student is deficient in grade points, he must take additional courses to secure these points. The student must obtain an average of 1.5 or more in his major field and 1.0 or more in his minor field. A minimum of one year in residence is required.

4. It is the aim of the institution to send forth men and women who are fit representatives. To this end, the College reserves the right to refuse to admit any student to the Senior Class or to graduate anyone who though qualified by class record may otherwise seem unfit.

5. Payment of diploma fee of five dollars (\$5.00) must be made to the Bursar on or before February 1 preceding graduation.

6. Students in the graduating class must clear all conditions by the end of the quarter preceding graduation.

7. Candidates for graduation must file an application for graduation upon the form provided, at least four months prior to the date they expect to graduate. A minimum of one year of residence is required.



## GRADUATION WITH HONORS

By a vote of the Administrative Council in the Spring of 1938, it was decided that henceforth graduation honors would be awarded candidates completing all requirements for graduation in accordance with the following stipulations: (1) Those who maintain throughout their course a grade point average within the range of 2.00 to 2.24 will receive "honor"; (2) those who maintain a general average within the range from 2.25 to 2.49 will receive "high honor"; and (3) those who maintain an average within the range from 2.50 to 3.00 will receive "highest honor".

## DEGREES

All students successfully completing any of the four-year courses of study shall be entitled to the degree of Bachelor of Science.

1. Those graduating from a four-year curriculum offered in the School of Mechanic Arts shall be entitled to the Bachelor of Science degree in Engineering, Architectural Engineering, Industrial Arts, Fine Arts, Commercial Industries, Business Administration or Commercial Education.

2. Those graduating from a four-year curriculum in Agriculture shall be entitled to the degree of Bachelor of Science in Agriculture.

3. Students successfully completing a curriculum in the School of Education and Sciences shall be entitled to the degree of Bachelor of Science.

4. The Master of Science degree will be awarded those meeting requirements for same. See page 68.)

## STUDENT ORGANIZATIONS

### ALPHA KAPPA MU HONOR SOCIETY

The Alpha Kappa Mu Honor Society is a national scholarship organization with local chapters established in grade "A" colleges.

The local chapter is now known as the Gamma Tau Chapter of the Alpha Kappa Mu Honor Society, and qualifications for Gamma Tau which have been changed to conform to those of the National Organization are as follows:

1. Candidate must have completed ninety quarter hours with an average of not less than 2.3 or sixty semester hours with same said average. These must include all required courses listed for freshmen and sophomores.

2. Membership is open to all students of the College provided they meet scholastic requirements, and, in the case of transfer students, there was and is a chapter of Alpha Kappa Mu or some other honor society with equivalent standards, rules and regulations at the institution from which they transferred.

3. Candidates must never have been suspended for disciplinary problems.

The Society encourages participation in at least one extracurricular activity. All students recommended by the Registrar as having the qualifications listed above are eligible for membership.

### **SOPHIST SOCIETY**

This organization is composed of regular college students of Freshman, Sophomore, and Junior clasification who maintain a minimum average of 2.3. The purpose of this organization is to encourage high scholarship among all college students.

Persons who remain in the Sophist Society for three years are eligible for membership in Gamma Tau Honor Society during the senior year.

### **SIGMA RHO SIGMA RECOGNITION SOCIETY**

Sigma Rho Sigma Recognition Society is a national honor society for Social Science majors; its membership is open to graduates and undergraduates. Chapters of the society are located in the various colleges represented in the membership of the Association of Social Science Teachers in Negro colleges.

The purposes of the society are:

1. To encourage study, promote research and to recognize achievement in the field of social science.
2. To promote the cooperation of students in the field of human relations.
3. To promote professional growth and development among the members.

To be eligible one must:

1. Be a junior majoring in the social sciences, with an average of two points or above and have a minimum credit of 25 hours in the social sciences.

### **BETA KAPPA CHI**

Recognition Society for honor students in fields of Science and Engineering.

### **FRATERNITIES**

The following national fraternities have chapters at the college: Alpha Phi Alpha, Omega Psi Phi, Phi Beta Sigma, and Kappa Alpha Psi.

### **SORORITIES**

The following national sororities have established local chapters: Alpha Kappa Alpha, Delta Sigma Theta, Zeta Phi Beta, and Iota Phi Lambda.

### **PAN-HELLENIC SOCIETY**

The Pan-Hellenic Society is federation of all fraternities and sororities on the campus. Its membership is composed of elected representatives from each Greek-letter organization. The main purpose is joint action for maintaining high standards in fraternity and sorority life at the institution.

### COLLEGIATE 4-H CLUB

The Collegiate 4-H Club is composed of students who have had previous experience as 4-H Club members in high school. An informal meeting of a business and social nature is held monthly. Honorary members may be elected to the club from time to time.

### THE COLLEGIATE NFA CLUB

The Collegiate Chapter of the New Farmers of America is composed of agricultural students who are former NFA members or trainees enrolled in the teacher training department of the School of Agriculture. The purpose of the collegiate chapter is to give training and experience to students who will later become teachers of vocational agriculture. Honorary members may be elected to the collegiate chapter of the New Farmers of America.

### THE AGRICULTURAL ASSOCIATION

This association is composed of agricultural students. It meets twice monthly for business and social purposes.

Honorary members may be elected to the association from time to time.

### RELIGIOUS ACTIVITIES

It is the purpose of the College to maintain a high moral tone and develop a broad, tolerant religious spirit among the students. In this connection there are well-organized Y. M. C. A. and Y. W. C. A. branches, which meets twice a month. A special service is conducted in the chapel each month by pastors representing the different denominations of the city. Sunday school is conducted every Sunday during the school year. All religious services are free from sectarianism.

### THE COLLEGE BAND

The College Band of more than fifty pieces occupies an important place in the life of the institution. Instruction by an expert bandmaster is given in all band instruments. A splendid opportunity is thus offered competent and worthy students to learn band music without extra expense to themselves.

Membership in the band is open to regular students of the College.

### FOREIGN LANGUAGE CLUBS

*Le Cercle Francais* and *El Circulo Espanol* and *Die Deutsche Gesellschaft* meet once a month during the academic year.

### THE FORTNIGHTLY CLUB

This organization, which gets its name from the period normally intervening between each meeting, is composed mainly of English majors and other advanced students who are interested in coming together for the purpose of exchanging ideas about books and people that have influenced or are influencing the life of their time.

### THE DEBATING SOCIETY

The Kappa Phi Kappa Forensic Society, better known as the Debating Society, is designed to stimulate interest in public speaking and debate. It is composed of college students who have distinguished themselves in public performances in these fields.

The Society awards a certificate of merit to any graduating senior who has participated in non-varsity debates or who has otherwise rendered meritorious service to the Kappa Phi Kappa Forensic Society for at least two years.

### THE A. AND T. LITTLE THEATRE

The A. and T. Little Theatre is an outstanding campus activity whose genuinely artistic work bespeaks the excellent training and unusual opportunities rendered by the dramatic workshop and laboratory theatre for unlimited experimentation in acting, playwriting, stagecraft, and play direction.

### CHORAL ORGANIZATIONS

The Choral Society, The Men's Glee Club and The A Capella Choir have won for themselves an enviable reputation, both at home and abroad, for the genuine artistry of their work. These organizations, open to all qualified students, offer extracurricular activity which is at once instructive and enjoyable.

## SCHOLARSHIPS AND PRIZES

### COLLEGE SCHOLARSHIPS

The College will grant a scholarship for one year to any student who makes a grade average of 2.5 for the three quarters of the preceding school year. This scholarship will pay tuition and can be used for no other purpose.

### SCHOLARSHIPS IN DAIRY HUSBANDRY

Six scholarships are given each year to high school graduates who wish to take a one-year short course in dairy husbandry. Board, room and all fees are paid. Applications should be obtained from the Dean of Agriculture before August 1st of each year.

### NFA SCHOLARSHIPS

The College offers a one-year scholarship of \$50.00 to the NFA member graduate from high school who has the best record in supervised practice work and scholastic activities for a period of four years.

### Y.W.C.A. SCHOLARSHIP

As a means of promoting scholarship among high school girls and to encourage them to attend college, the College Y. W. C. A. offers, each year, a scholarship of \$50.00 to be used in defraying college expenses. The selection is made at the "Y" May Festival by the May Queen.

#### 4-H CLUB WORK SCHOLARSHIP

In order to promote interest among Negro 4-H Club boys in North Carolina and to encourage continuous achievements in all phases of 4-H Club work, the College offers a one-year scholarship of \$50 to the high school graduating senior with the best record in 4-H Club work. This is to be used in defraying expenses at the institution.

#### WILLIAM H. FOUSHEE MEMORIAL SCHOLARSHIP CUP

Dr. J. M. McGee of Greensboro each year presents a scholarship cup in memory of William H. Foushee, Jr., a former student of A. and T. College, to the member of the Junior Class with the highest scholastic average.

#### THE CHARLES L. COOPER AWARD

Mu Psi Chapter of the Omega Psi Phi Fraternity presents annually this award in memory of Dr. Charles L. Cooper, a former professor of Industrial Education at A. and T. College. It is presented to the student in Industrial Arts with the highest average above two points.

#### THE REGISTER AWARD

As a means of promoting a wider interest and greater activity on the part of the students in the field of journalism, the College *Register* awards a gold key to those members of the graduating class who completed a period of at least two years of meritorious service as members of the *Register* staff.

#### ALUMNI ATHLETIC AWARD

The Philadelphia branch of the College Alumni Association awards a gold medal each year to the student of the graduating class making the best record in major intercollegiate sports.

#### ALUMNI SERVICE AWARD

The Gate City (Greensboro) Chapter of the Alumni Association makes an award each year to that member of the graduating class, voted by the Administrative Council as having rendered the "most distinctive service to the College and to the community."

#### THE KAPPA PHI KAPPA KEY

The Kappa Phi Kappa Key was first awarded in 1928 by the Kappa Phi Kappa Debating Society.

The key is awarded to the member, or members of the graduating class who have been speakers on the college varsity team for two years.

#### COHEN PRIZE

The Ned Cohen Prize is given by the Ned Cohen Jewelry Box of Greensboro, to the student in Secretarial Science who receives the highest scholastic average.



### DEBATING TROPHY

The Rand-Hawkins-McRae debating trophy is provided by Messrs. J. M. Rand, J. A. Hawkins and S. D. McRae, graduates of the College, Class of 1906, and is awarded annually to the members of the graduating class who have at least three years of varsity debating.

### MEDALS

The John Merrick Medal will be awarded to the student completing the four-year mechanical course with the best record in the college department.

The M. F. Spaulding Medal will be awarded to the student completing the full four-year course in agriculture with the best record.

The Saslow's, Inc., Medals will be awarded (a) to the member of the graduating class who completes the four-year course in the School of Education and Sciences with best record, and (b) to the student who graduates with best record in Social Sciences.

The Regal Jewelers Medals are awarded each year to two or more students in the graduating class with the best records in their respective fields.

It will be awarded to the student completing the four-year agricultural course with the best record in Farm Mechanics or Agricultural Engineering.

### ALUMNI LOAN FUND

The primary purpose of this loan fund is to provide financial aid to needy students who have demonstrated potential ability to become useful citizens. Evidences of this ability are character, mental alertness, industry, and scholarship. No student is encouraged to burden himself with debt unless he has a definite purpose in continuing his formal education at the College.

When a student's application is approved, he must sign a formal note for the amount of the loan. For Juniors the note is usually made out payable on or before entering school the following fall. For Seniors the note is usually made out payable within one year from the date of the loan. For emergency loans the note is made out payable within thirty to sixty days from the date of the loan.

No student may borrow more than \$50.00 within one year. Usually loans will be limited to \$20.00 or less a quarter. The amount of the quarterly loan may be exceeded in exceptional cases, but the maximum of \$50.00 will not be exceeded in any case.

All money borrowed from the Alumni Loan Fund must be used for direct college expenses. Such expenses may be: tuition, room rent in a college dormitory, board at the College Dining Hall, books at the College Canteen, and laboratory fees. No cash will be issued on any loan.



### HICKS-MOSLEY STUDENT LOAN FUND

The Hicks-Mosley Student Loan Fund, which was established during the school year 1939-40 by Miss Esther Hicks, Commercial Education instructor at the College, in honor of her parents, is designed to aid worthy students who have clearly evidenced talent and ability but who lack the means to continue their schooling and deserve moderate financial aid that will enable them to complete their studies for a beneficial period of time.

Small amounts of money will be loaned at the crucial times when deemed advisable and a moderate rate of interest charged. Students are to apply by written application according to the time schedule indicated below, and all loans are due (both principal and interest) September 1, of the year after loan is granted. All loans must be secured by legal note.

Students desiring loans should apply during the following periods:

For loans granted Fall Quarter,  
September 1, September 15.

For loans granted Winter Quarter,  
December 1, December 15.

For loans granted Spring Quarter,  
March 1, March 15.

### SUMMER SCHOOL

*In Point of Continuous Service, the Oldest Summer School in the Country for Negroes*

The fiftieth annual summer session of the A. and T. College Summer School will begin June 8, 1950, and continue for ten weeks, thereby completing a full quarter of college work under the new accelerated plan.

Aside from the splendid opportunity which the Summer School offers teachers in service to raise their certificates and thereby obtain better salaries, the College makes it possible for the ambitious teacher to obtain a standard degree by attending the summer school.

College students may shorten their stay in college by attending summer school. Students from other institutions may enter the summer session for credit in their respective institutions, by permission from either the President or Dean of their respective colleges. Such students will not be required to present a complete record of their previous training, but will be required to present a signed statement from the President or Dean indicating the summer courses for which credit will be allowed.

College graduates may use their time in summer school meeting requirements for the Master of Science degree. Persons interested in earning this degree should make application for candidacy early in order that their program may be arranged with this end in view.

### EVENING SCHOOL

The College conducts an Evening School for teachers in service, and others who can qualify for the courses offered. All evening courses are the same as such courses that are offered in the regular day classes, and may be offered towards a degree. Admission to the Evening School is the same as for the regular day classes. The same amount of work.

## EXPENSES AND FEES

1949-1950

Boarding students entering for the first time should be prepared to make the following payments:

	<i>Men</i>	<i>Women</i>
Board ( $\frac{1}{2}$ month) .....	\$ 11.00	\$ 11.00
***Lodging ( $\frac{1}{2}$ month) .....	3.50	3.50
*Tuition, Fall Quarter .....	25.00	25.00
Laundry .....	2.00	1.00
**Registration .....	9.00	9.00
†Medical Fee .....	3.00	3.00
Athletic Fee .....	8.00	8.00
Laboratory Fee .....	5.00	5.00
College Register Fee (Student Publications) .....	3.00	3.00
Rental Mailbox .....	1.00	1.00
Dormitory Room Key Deposit .....	.50	.50
Library and Laboratory Fee .....	2.00	2.00
Student Activity Fee .....	2.00	2.00
<hr/>		
†Total payment first month, Sept. 15, 1949 .....	\$ 75.00	\$ 74.00

(A deposit of ten dollars must be added to this total by all R. O. T. C. students. See page 135.)

Second payment, due Oct. 1, 1949 .....	\$ 31.00	\$ 30.00
Third payment, due Nov. 1, 1949 .....	31.00	30.00
Fourth payment, due Dec. 1, 1949 through Dec. 21, 1949 .....	25.50	24.50
Fifth payment, due Jan. 2, 1950 .....		
*(Quarterly lab. and tuition fees due) .....	61.00	60.00
Sixth payment, due Feb. 1, 1950 .....	31.00	30.00
Seventh payment, due March 1, 1950 .....	31.00	30.00
Eighth payment, due April 1, 1950 .....		
*(Quarterly lab. and tuition fees due) .....	61.00	60.00
Ninth payment, due May 1, 1950 .....	31.00	30.00
<hr/>		
Grand Total .....	\$377.50	\$368.50

\* An out of state tuition of \$11.00 per quarter will be charged for non-residents of North Carolina.

\*\* Registration fee includes lectures and lyceum entertainments and library privileges.

\*\*\* Lodging at North Campus, \$6.00 per month.

† **Medical Fees:** All students will be charged a fee of \$3.00 which will cover physical examination, medicine (quota of two issues per month), prescriptions issued by College Physician only and first aid.

The following cost will be charged to students confined to bed in the Infirmary:

Boarding Students .....	\$1.00 per day
City Students .....	2.00 per day
Ambulance .....	2.00 per trip
Laboratory Fee (if ordered by physician) .....	2.00
Medicine .....	.50 per issue over quota

X-Ray fees will be charged according to the type of picture.

† Students, in paying their September entrance fee, may also make the second payment, which is due October 1, if they so desire.

A student boarding and lodging in the city should be prepared to make the following payments:

*Tuition and Occupancy (Monthly).....	\$ 11.00
**Registration .....	9.00
†Medical Fee .....	3.00
Athletic Fee .....	8.00
Laboratory Fee .....	5.00
College Register (Student Publications).....	3.00
Student Activity Fee .....	2.00
Library and Laboratory Fee.....	2.00
<hr/>	
Total payment first month, Sept. 14, 1949.....	\$ 43.00
Second payment, due Oct. 1, 1949.....	\$ 11.00
Third payment, due Nov. 1, 1949.....	11.00
Fourth payment, due Dec. 1, 1949.....	11.00
*Fifth payment, due Jan. 3, 1950	
(Quarterly lab. fees due).....	16.00
Sixth payment, due Feb. 1, 1950.....	11.00
Seventh payment, due March 1, 1950.....	11.00
*Eighth payment, due April 1, 1950	
(Quarterly lab. fees due).....	16.00
Ninth payment, due May 1, 1950.....	11.00
<hr/>	
Grand Total .....	\$141.00

Health examinations will be administered to freshmen and other new students September 14, 15, 16, and to upperclassmen September 16, 17, 18. These examinations are prerequisite to registration.

### QUARTERLY FEES

1949-50

Agronomy Lab. 131, 132, 133, 140.....	\$2.00
Agronomy Lab. 122, 123.....	1.00
Architectural Drawing .....	3.00
Art 317, 318, 319.....	5.00
Auto Mechanics .....	5.00
Auto Mechanics (3 Hours Credit).....	2.50
Bacteriology Lab. ....	3.00

\* An out-of-state tuition of \$11.00 per quarter will be charged for non-residents of North Carolina.

\*\* Registration fee includes lectures and lyceum entertainments and library privileges.

† **Medical Fees:** All students will be charged of a fee of \$3.00 which will cover physical examination, medicine (quota of two issues per month), prescriptions issued by College Physician only and first aid.

The following cost will be charged to students confined to bed in the Infirmary:

Boarding Students .....	\$1.00 per day
City Students .....	2.00 per day
Ambulance .....	2.00 per trip
Laboratory Fee (if ordered by physician).....	2.00
Medicine .....	.50 per issue over quota

X-Ray fees will be charged according to the type of picture.

Botany Lab. ....	3.00
Cabinetmaking .....	5.00
Carpentry .....	5.00
Carpentry and Cabinetmaking (3 Hours Credit) .....	2.50
Cement Finishing and Bricklaying .....	5.00
Ceramics .....	5.00
Chemistry Lab. ....	5.00
Commercial Industrial Shops .....	5.00
Dairy Lab. 121, 134 .....	4.00
Drawing .....	3.00
Education 622 .....	1.00
Electrical Engineering .....	3.00
Fine Arts Drawing .....	3.00
Foods Lab. ....	4.00
Free Hand Drawing .....	3.00
General Science 131, 132 .....	2.00
General Wood Work .....	5.00
Industrial Arts Shop .....	5.00
Laundry 311, 312, 313 .....	2.50
Machine Shop Practice .....	3.00
Masonry (3 Hours Credit) .....	2.50
Office Appliances 324 .....	3.00
Physics Lab. ....	3.00
Poultry 131, 133 .....	2.00
Plumbing .....	5.00
Plumbing (3 Hours Credit) .....	2.50
Shoe Repairing .....	5.00
Tailoring .....	5.00
Tailoring (3 Hours Credit) .....	2.50
Textile Lab. ....	2.00
Typewriting .....	5.00
Typewriting and Advanced Stenography 322 .....	5.00
Vocational Drawing .....	3.00
Welding (300 Series) .....	4.00
Welding (400 Series) .....	8.00
Work Shop Courses (Education) .....	1.00
Working Drawings .....	3.00
Zoology Lab. ....	3.00
Examination Supplies (mid-term and final) .....	0.25

### OTHER FEES

Rental of cap and gown .....	\$ 3.00
Certificate fee .....	3.00*
Diploma fee .....	5.00*
Fee (for each transcript of student's record after the first) .....	1.00
Fine per day for late class registration each quarter .....	1.00

\* These fees must be paid not later than February 1 by all persons expecting to complete courses of study during the regular year.

Radio fee per month .....	.50
Music (two lessons per week and use of Piano for practice per month) ..	4.00
Practice teaching (other than Vocational Agriculture) .....	25.00

NOTE: All fees and bills are payable in advance. Make all post office money orders, bank drafts and cashier's checks payable to A. and T. College. Personal checks are not accepted unless certified.

### SPECIAL NOTICE

Due to the rising cost of living the Administration reserves the right to raise fees and charges without advance notice should conditions warrant.

F. D. BLUFORD, *President.*

### SELF-HELP

The institution cannot guarantee jobs to students who expect to work their way through college. Many students find work in private families and in other occupations, by means of which they defray a portion of their expenses. A person of ability and energy who can do work of any kind can generally find employment, but prospective students are cautioned against depending upon such unreliable sources of income.

# INSTITUTIONAL ORGANIZATION

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## SCHOOL OF AGRICULTURE

JOHN C. McLAUGHLIN, Dean

The School of Agriculture aims to educate efficient farmers, teachers of agriculture, agricultural extension workers, and leaders in other lines of agricultural activities. Courses are given in various departments of technical agriculture.

The School of Agriculture is equipped to train men and women in horticulture, dairy husbandry, poultry production, rural engineering, rural sociology, rural education, agronomy, and animal husbandry.

### Agricultural Building

The Noble Agricultural Building provides space for agricultural classes and laboratory activities. The third floor is occupied by the chemistry laboratory lecture room and storerooms; large rooms are equipped on the second floor for the botanical and zoological laboratories, classrooms for these courses and office space for the State Extension Service; the first floor is occupied by the office of the director of the School of Agriculture, office of the State District Farm and Home Demonstration Agents, the Home Economics Department and the bacteriology laboratory; the basement provides space for laboratories in soils, farm crops, horticulture and dairy husbandry and offices.

### Farms

The College has four farms. The old farm is located on State Highway No. 70, and on the Southern Railroad from Greensboro to Goldsboro, about one mile from the campus, and contains one hundred and three acres. There is on this farm a modern piggery, dairy barn, poultry plant, 78 acres of permanent pasture, implement sheds, barns and orchard containing several hundred fruit trees of various kinds, and a two-story brick dormitory. The dormitory is for the dairyman and the poultryman.



The second farm contains one hundred and forty-three acres and is located on the McConnell Road about one mile south of the old farm. It has a large shed on it for sheltering farm implements.

The third farm is located three quarters of a mile south of the old farm partly facing the new farm, north of McConnell Road, and contains two hundred and sixty-one acres. There are on this farm five dwelling houses and six barns.

The fourth farm contains one hundred and seventy-three acres and adjoins farm number two on the south side.

These farms are equipped with modern machinery necessary for successful farming under North Carolina conditions. The farms give an opportunity for instruction and practice in handling small farms on an intensive basis.

### **Four-Year College Course in Agriculture**

This course leads to B.S. degree in Agriculture. The entrance requirements are the same as stated elsewhere in this catalogue.

### **Requirements for Graduation**

The successful completion of one of the prescribed curricula consisting of a minimum of 200 quarter hours and 200 grade points is required for graduation. In addition the student must have a thorough, practical knowledge of farming activities and rural life conditions before receiving his degree. Students who have not had this experience before entering the course will be given an opportunity to get it before ending their college career.

### **The Curriculum**

The curriculum in General Agriculture aims to give the student instruction in courses which will prepare him for intelligent practical farming, farm management and extension service.

The curriculum for Teachers of Agriculture is designed to prepare the trainee to qualify under the provisions of the Federal Vocational Acts to occupy positions as teachers of vocational agriculture in North Carolina and other states. Students who expect to teach vocational agriculture in North Carolina will be required to meet the professional requirements of the State.

**Freshmen**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English 211, 212, 213 -----	5 (5-0)	5 (5-0)	5 (5-0)
Chemistry 112, 111, 113 -----	5 (3-4)	5 (3-4)	5 (3-4)
Poultry 111, 112 -----	3 (2-2)	3 (2-2)	-----
Horticulture 113 -----	-----	-----	4 (2-4)
Economics 114, 115 -----	3 (3-0)	3 (3-0)	-----
Military Science 211, 212, 213 -----	2 (3-2)	2 (3-2)	2 (3-2)
Physical Education 213 -----	-----	-----	1 (1-0)
Education 211 -----	1 (1-0)	-----	-----
Farm Mathematics 111 -----	-----	-----	3 (3-0)
Physical Education 210 a, b, c -----	1 (0-2)	1 (0-2)	1 (0-2)
	<hr/>	<hr/>	<hr/>
	20	19	20

**Sophomores**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Agronomy 122, 123 -----	-----	3 (2-2)	3 (2-2)
Bacteriology 123 -----	-----	5 (3-4)	-----
Botany 111 -----	5 (3-4)	-----	-----
Botany 123 -----	-----	-----	3 (2-2)
Dairy 121 -----	5 (3-4)	-----	-----
Horticulture 122, 123 -----	-----	3 (2-2)	3 (2-2)
Animal Husbandry 122 -----	-----	3 (2-2)	-----
Poultry 122 -----	-----	3 (2-2)	-----
Zoology 111 -----	5 (3-4)	-----	-----
Military Science 221, 222, 223 -----	2 (3-2)	2 (3-2)	2 (3-2)
English -----	-----	-----	5 (5-0)
Physical Education a, b, c -----	1 (0-2)	1 (0-2)	1 (0-2)
	<hr/>	<hr/>	<hr/>
	18	20	17

**CURRICULUM FOR TEACHERS OF AGRICULTURE****Juniors**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Agronomy 131 -----	3 (2-2)	-----	-----
Animal Husbandry 132, 131 -----	5 (3-4)	-----	3 (2-2)
Horticulture 133 -----	4 (2-4)	-----	-----
Education 231, 237, 238 -----	3 (3-0)	3 (3-0)	3 (3-0)
Zoology 133 -----	-----	-----	5 (3-4)
Rural Engineering 132, 133 -----	-----	3 (0-6)	3 (0-6)
Economics 231, 142 -----	5 (5-0)	5 (5-0)	-----
Dairy 145 -----	-----	4 (2-4)	-----
Education 233 -----	-----	3 (3-0)	-----
Electives -----	-----	-----	4 ( )
	<hr/>	<hr/>	<hr/>
	20	18	18

**Seniors**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Education 141, 142, 143 -----	5 (5-0)	5 (5-0)	5 (5-0)
Agronomy 140, 133 -----	4 (2-4)	-----	3 (2-2)
Animal Husbandry 141 -----	-----	3 (2-2)	-----
Education 501 -----	-----	3 (3-0)	-----
Rural Sociology 501 -----	3 (3-0)	-----	-----
Rural Engineering 143 -----	-----	3 (0-6)	-----
Electives -----	7 ( )	3 ( )	4 ( )
	<hr/> 19	<hr/> 17	<hr/> 16

**ELECTIVES FOR AGRICULTURAL STUDENTS**

<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Econ. 143	Educ. 249	Educ. 236
Physics 321	Educ. 224	Dairy 132
Sec. Sc. 317	Educ. 341	A. Hus. 134
Eng. 231	Geo. 240	Geo. 241
Zool. 121	Physics 322	Ed. 221
R. Eng. 111, 112	Eng. 231 or 224	Eng. 220
	Hort. 119	Bot. 122
	Poul. 501	
	B. A. 232	

Students desiring to fit themselves for Civil Service examinations may elect other courses from any department that fits their individual need, with the approval of the director.

**MAJOR IN GENERAL AGRICULTURE AND  
EXTENSION SERVICE****Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Sociology 231 -----	5 (5-0)	-----	-----
Econ. Commercial Law 143, 335 -----	5 (5-0)	5 (5-0)	-----
Econ. 142 -----	-----	-----	5 (5-0)
Poultry 131 -----	3 (2-2)	3 (1-4)	-----
Agronomy 131 -----	3 (2-2)	-----	-----
An. Hus. 132, 131 -----	5 (3-4)	-----	3 (2-2)
Education 231 -----	-----	-----	5 (5-0)
Horticulture 123 -----	-----	-----	3 (2-2)
*Electives -----	-----	5 ( )	2 ( )

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\* Electives must be approved.

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
**Observation and Practice in Extension			
148, 149 -----	5 (5-0)	5 (5-6)	-----
Sociology 501 -----	3 (3-0)	-----	-----
Agronomy 140, 133 -----	4 (2-4)	-----	3 (2-2)
Dairy 134, 145 -----	-----	5 (3-4)	4 (2-4)
Dairy 146 -----	-----	4 (2-4)	-----
Ext. Problems 150 -----	-----	-----	3 (0-6)
Bot. 123 -----	3 (2-2)	-----	-----
Rur. Eng. 141, 142, 143 -----	3 (1-4)	3 (0-6)	3 (0-6)
*Electives -----	-----	-----	5 ( )

**TWO-YEAR COLLEGIATE COURSE IN AGRICULTURE**

This course is designed for those who are actually engaged in farming or who expect to be farmers. The course is intended to meet the needs of young people of the State who for any reason are not financially able, or who do not desire to take the full four years of college work.

The course gives practical work covering the general and specialized features of agriculture in North Carolina.

Students taking the two-year course do not have to adhere strictly to the outline; other courses may be substituted that will best meet the needs of the individual student with the advice of the Dean. Students may elect work for one year, or one quarter as will best meet their immediate needs.

The opportunities for graduates of this course will depend largely upon the character of the student's work while in college, his previous experience, his personality, ability, ambition and industry. With the readjustment through which agriculture is now passing, and the close competition farmers are forced to meet, there is coming a condition which will make it more necessary than ever before for the self-sufficient as well as the commercial farmers, to be trained and intelligent.

A certificate will be awarded on the satisfactory completion of this agricultural course. In the event a student decides to return later to complete the full four-year course, he will receive credit toward his degree for the two years of work already done.

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\* Electives must be approved.

\*\* Students interested in general agriculture may select other courses.

## SUGGESTED OUTLINE OF TWO-YEAR COLLEGIATE COURSE IN AGRICULTURE

### First Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Econ. 114, 115 -----	3 (3-0)	3 (3-0)	-----
Poul. 111, 112, 122 -----	3 (2-2)	3 (2-2)	3 (2-2)
Eng. 211, 212, 213 -----	5 (5-0)	5 (5-0)	5 (5-0)
Hort. 123, 113 -----	-----	-----	4 (2-4)
Agron. 122, 123 -----	3 (2-2)	3 (2-2)	-----
An. Hus. 122 -----	-----	3 (2-2)	-----
Bot. 121 -----	-----	-----	3 (2-2)
Dairy 121 -----	-----	-----	5 (3-4)
Chem. 111 -----	5 (3-4)	-----	-----

### Second Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Econ. 231, 142 -----	5 (5-0)	-----	5 (5-0)
An. Hus. 131, 132 -----	3 (2-2)	5 (3-4)	-----
Zool. 131 -----	-----	-----	3 (2-2)
Agron. 140, 133 -----	4 (2-4)	-----	3 (2-2)
Dairy 133, 145, 146 -----	4 (2-4)	4 (2-4)	4 (2-4)
R. Eng. 141, 142, 143 -----	3 (1-4)	3 (0-6)	3 (0-6)

# SCHOOL OF MECHANIC ARTS

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J. M. MARTEENA, Dean

The School of Mechanic Arts offers many opportunities to students to help them prepare to meet the demands of industry for leaders and skilled workmen in various technical professions and vocations. In addition to the professional courses and those designed to prepare skilled workmen, the department offers training to prepare teachers in many of these fields. Students who complete the teaching requirements as outlined in the several curricula will qualify for the Class "A" Certificate.

The four-year courses leading to the Bachelor of Science degree are as follows: Architectural Engineering, Business Administration, Commercial Education, Vocational Industrial Education, Electrical Engineering, Fine Arts, Industrial Arts Education and Mechanical Engineering.

Majors in Mathematics or Physics are offered to students in all departments.

The Vocational Courses leading to certificates are as follows: Auto Mechanics, Carpentry, Cabinet Making and Upholstering, Shoe Repairing and Leather Work, Tailoring, Machine Shop Practice, Masonry, Secretarial Science, Plumbing and Steam Fitting, Welding, Radio Servicing, Electric Wiring, Laundry and Dry Cleaning.

## Mechanic Arts Division

In the past few years the State of North Carolina has invested many thousands of dollars in equipment for the various departments of the School of Mechanic Arts. Each department has among its equipment some of the latest designs in machinery and tools for each particular line of work.

## Admission to the School of Mechanic Arts

The admission requirements are generally the same as those given for entrance to the freshman class. One year of algebra and one year of plane geometry are required for students electing a curriculum leading to a B.S. degree. Students admitted with a condition in plane geometry will be required to remove it during their freshman year.



## Advanced Standing

Students who have attended colleges of approved standing will be given appropriate credit for work completed there, upon the presentation of the proper certificate to the Registrar, who will determine the credits for the curriculum which the student wishes to take.

## Requirements for Graduation

The requirements for graduation in any division of the School of Mechanic Arts are the satisfactory completion of all courses in one of the prescribed curricula.

## Outline of the First Year's Work of All Four-Year Curricula

In order to permit all students in the School of Mechanic Arts to find out definitely what courses they desire to pursue the first year of all four-year curricula is made uniform.

### Freshman Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Chemistry 111, 112, 113* -----	5 (3-4)	5 (3-4)	5 (3-4)
Mathematics 311, 312 313** -----	5 (5-0)	5 (5-0)	5 (5-0)
English 211, 212, 213 -----	5 (5-0)	5 (5-0)	5 (5-0)
Mechanical Drawing, M.E. 311, 312 -----	3 (0-6)	3 (0-6)	-----
Descriptive Geometry 314 -----	-----	-----	3 (1-4)
Military Science, M.E. 211, 212, 213 -----	2 (2-2)	2 (2-2)	2 (2-2)
	<hr/> 20	<hr/> 20	<hr/> 20

\* Students in Fine Arts and Industrial Education are not required to take Chemistry 113. Students in Industrial Education will take Physical Education and welding in their Freshman year.

\*\* Students in Fine Arts may substitute History 213 for Math 313 and Art 320 for Chemistry in the Spring Quarter.

# THE SCHOOL OF EDUCATION AND SCIENCES

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WARMOTH T. GIBBS, Dean

The School of Education and Sciences offers to the student opportunity to prepare either for teaching or for any one of several distinct vocational and professional pursuits. The courses are so constructed that the student, although specializing, may also come in contact with subjects that possess wide cultural value and insure that broader outlook upon life which characterizes the educated man or woman. This School also offers professional courses in subjects required by the State Board of Education for the Standard "A" grade teaching certificate.

This School includes the following fields of study: economics, education, English, foreign languages, general science, music, physical education and the social sciences as well as subjects required for completion of the pre-medical course.

## Requirements for Admission

Admission requirements are the same as those given for entrance to the Freshman Class. See page 32.

## Majors and Minors

A student upon entering his third year is expected to concentrate in two definite fields of study. In arranging his work he must conform to the following regulations: (1) At least forty-five hours of the total number required for graduation must be chosen from a particular subject or field, in which he must maintain a graduate point average of 1.5 or more. This will constitute the student's major group. (2) At least 27 hours must be chosen from another subject or field, in which he must maintain a grade point average of 1.0 or more.\* This will constitute his minor group. The major should represent the student's principal field of interest and the minor, that of his second selection. Persons preparing to teach are advised to complete majors in two fields.

No student is permitted to major or minor in a subject until he has filled out and turned in the special application form for majors and minors and has, thereby, received the written ap-

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\* Fifty hours are required for a major in English; thirty-eight hours for a minor.

proval of the heads of the two subject-matter departments in which he proposes to concentrate; that is, the department of his major and minor, or of his two major fields.

The following are suggested as fields for major study in this School:

1. Biological Science.
2. Chemistry or Physics.
3. English.
4. Mathematics.
5. Modern Languages.
6. Music.
7. Physical Education.
8. The Social Sciences.

A student may select any one of the above fields, Art, Military Science or Business for a minor.

### Graduation Requirements

A minimum of 200 credit hours and 200 grade points is required for graduation.

In addition to majors and minors, each candidate for graduation will be required to meet the following distribution requirements both as to subjects and hours:

1. Foreign language, 10 hours for those who present two admission units of high school credit in the same language, and who pass the placement test in same, others 15 hours.

\*2. Mathematics, 10 hours.

3. English composition, 15 hours; and literature (English or American) 5 hours.

4. Science: 10 hours of chemistry or physics and 10 hours of biological sciences.

5. Social Science; History: of the Negro, of America, of Modern Europe\*\*, 5 hours of each: 15 hours, total.

6. Music or art appreciation, 9 hours.

7. Military science, 12 hours; Physical Education, 6 hours.

8. Health and physical education for women, 9 hours.

9. Orientation, 1 hour.

10. Vocations, 6 hours.

11. Research, 3 hours.

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\* Persons holding a satisfactory State teacher's certificate may substitute general science for mathematics.

\*\* Political science, economics or sociology may be substituted for modern European history.

### Senior Research Rules

A candidate for the bachelor's degree in the School of Education and Sciences must satisfactorily complete a senior research project as part of the graduation requirement. This project may be written in the candidate's major or minor field, and the student may choose any instructor in the field in which he is writing the paper as his adviser. This adviser will automatically become a member of the Senior Research Committee, the Chairman of which is the instructor in charge of the research course (Research 246). The candidate is responsible first to his adviser and then to the Chairman of the Senior Research Committee.

At the discretion of the instructor of Research 246, students who are candidates for graduation with honors or who for any other reason are capable of or willing to undertake a project of greater scope and higher caliber than required for other projects will be expected to have their papers typed and bound. Any such paper will be known as a "thesis," which upon completion must be signed by the candidate's adviser, the Chairman of the Senior Research Committee, and the Dean of the School of Education and Sciences. It becomes the property of the College Library.

Each candidate is required to take the research course at least one quarter preceding the quarter in which he expects to graduate. Thus, students wishing to graduate in the spring must take the course not later than the Winter Quarter; those wishing to graduate in August may wait until the Spring Quarter preceding graduation.

The student is required to finish the research project by the end of the quarter in which he is taking Research 246. If, however, circumstances over which he has no control prevent him from completing the project in that time, it must, nevertheless, be completed on or before May 15 in the case of persons expecting to graduate in the spring. If a candidate for graduation in August is unavoidably prevented from completing his paper while taking the course, he must finish it two weeks before the date of graduation.

### Electives

In addition to minimum distribution requirements, a major and a minor, required of all, each student is permitted to elect such additional courses as will satisfy the graduation requirements, but in so doing he is urged to exercise the greatest care

in order that his choice may add further to the integration and coordination of his program. All such electives must be made with the approval of the student's adviser.

The elective work may be taken in any of the departments indicated above or from any other department of the institution subject to the approval of the Dean of the School of Education and Sciences.

Students are urged to select courses in accordance with a definite plan, and with a definite object in view. Those looking forward to teaching or working in small towns or rural districts especially should bear in mind that the number of trained workers in any given department is likely to be small and the facilities limited. They should therefore use their choice of electives in acquiring knowledge or skills that will be of immediate use to them in such communities. Courses in general agriculture, animal husbandry, commercial industries, industrial arts, foods and clothing may prove to be the most beneficial as electives for such students. These are strongly recommended as electives for such teachers and workers.

#### REQUIRED COURSES FOR FRESHMEN AND SOPHOMORES

	<i>Hours</i>
English 211, 212, 213 .....	15
English 220, 221, or 223 .....	5
Foreign language (one language) .....	10-15
Mathematics 311, 312 .....	10
History 211, or 212, 213; 221 or 222 .....	15
Chemistry 111, 112, or Physics 311, 312 .....	10
Biological Science (Botany 111, Zoology 111) .....	10
Music or Art Appreciation .....	6
Military Science 211, 212, 213, 221, 222, 223 (for men) .....	12
Physical Education, six quarters .....	6- 9
Orientation (Ed. 211) .....	1
Vocations .....	6

#### SAMPLE SCHEDULE

The following are typical examples of how normal schedules might be arranged. Others more in accord with the student's interest and aptitudes might be selected:

**Freshmen**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Eng. 211, 212, 213-----	5 (5-0)	5 (5-0)	5 (5-0)
Math. 311, 312 -----	5 (5-0)	5 (5-0)	-----
French or Spanish 211, 212, 213-----	5 (5-0)	5 (5-0)	5 (5-0)
Ed. 211 -----	1 (1-0)	-----	-----
Mil. Sci. 211, 212, 213-----	2 (3-2)	2 (3-2)	2 (3-2)
or			
Physical Education -----	1 (0-2)	1 (0-2)	1 (0-2)
Mus. 211, 212, 213			
or			
Art 314, 315, 316 -----	2 (2-0)	2 (2-0)	2 (2-0)
Vocations -----	3 (0-6)	3 (0-6)	3 (0-6)
	<hr/>	<hr/>	<hr/>
	19	19	19

**Sophomores**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Eng. 223, 220, or 221-----	5 (5-0)	5 (5-0)	5 (5-0)
Chem. 111, 112			
or			
Phy. 311, 312-----	5 (3-4)	5 (3-4)	-----
Bot. 111 -----	5 (3-4)	-----	-----
Zool. 111 -----	-----	5 (3-4)	-----
Math. 313 -----	-----	-----	5 (5-0)
Mil. Sci. 221, 222, 223-----	2 (3-2)	2 (3-2)	2 (3-2)
or			
Physical Education -----	1 (0-2)	1 (0-2)	1 (0-2)
Mus. 221, 222, 223			
or			
Art 327, 328, 329-----	2 (2-0)	2 (2-0)	2 (2-0)
History -----	-----	5 (5-0)	5 (5-0)
Educ. 221 -----	-----	-----	5 (5-0)
French or Spanish -----	5 (5-0)	-----	-----
	<hr/>	<hr/>	<hr/>
	19	19	19

## COURSES PRELIMINARY TO ADMISSION TO MEDICAL COLLEGE

This institution has been rated as class "A" by the American Medical Association as to qualifications for giving pre-medical training. Students completing the prescribed course may therefore be admitted to the medical colleges of this country without examination.

All students planning to study medicine are urged, however, to complete the four-year course and receive their degree before entering a medical school.



## Pre-Medical Course

Students are advised to select subjects in college which assure a broad background for later medical study rather than merely confirming themselves to courses and fields required in the medical curriculum. Electives should include psychology, political science, history, economics, sociology, and mathematics.

The following represent the minimum requirements in general for admission to class "A" Medical Schools:

	<i>Quarter Hours</i>
*Chemistry (inorganic) -----	15
Chemistry (organic) -----	10
Physics -----	15
Biology -----	12
English (composition and literature) -----	13
A modern foreign language (a reading knowledge) -----	12
Electives -----	10-18

Most medical colleges recommend at least one year of college mathematics.

## Advanced Standing

Students who transfer from accredited colleges will be given credit for previous work done, upon presentation of records to the proper authorities, who will evaluate them.

## Opportunities for Women

All courses in the College are open to women on the same basis as men. There is a great demand for well-trained women not only as teachers but in practically all fields of endeavor. Accordingly, women registering in the teacher training division may, with approval of their advisers, select courses in any other division or department of the institution.

The aim of this division is to give the women as well as the men who plan to teach every opportunity to take full advantage of all the facilities of the College in developing the best and most comprehensive training possible.

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\* Pre-medical students and majors or minors in Chemistry should register for Chemistry 111, 112, and 113 in successive quarters.

# **THE GRADUATE SCHOOL**

**W. L. KENNEDY, Chairman**

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## **General Statement**

The Agricultural and Technical College of North Carolina offers to qualified students the opportunity to pursue advanced courses and to undertake research in agriculture, technical and applied sciences. All the technical and scientific departments give courses and direct research leading to the various Master of Science degrees.

The object of graduate study differs somewhat from that of undergraduate study. While extending the range of the student's knowledge still further, the constant aim is to develop initiative, judgment, and the power of independent thought.

The work of the Graduate School is under the general control of the Graduate Committee. The Chairman of the Graduate School is in charge of the general supervision of all graduate students and is the medium of communication between such students and the college administration. The faculty consists of such members of the instructional staff as have immediate supervision of graduate courses.

## **Admission**

Admission to the Graduate School may be granted to graduates of institutions whose requirements for the baccalaureate degree are substantially equivalent to those of The Agricultural and Technical College of North Carolina.

Admission is granted by the College Registrar. If the applicant has attended more than one institution, an official transcript of the work covered at each institution is required. This applies to the complete academic record, both undergraduate and graduate. Official credentials should be sent directly from institutions to the Registrar. Failure to give attention to this important point in advance will lead to delay in registration.

Prospective students may make inquiries at any time regarding the possibilities of graduate study. Questions concerning admission should be addressed to the College Registrar. Blanks to be used in making applications for admission are obtained from the Registrar. General inquiries regarding graduate work may be

addressed to the Chairman of the Graduate School. Students should not hesitate to write directly to a department head if they have specific questions regarding the work of a department.

### **Registration**

All students must register at the beginning of each quarter or summer term. The registration days are indicated in the college calendar. Graduate students are allowed three days for registration following the regular registration days before the late fee of \$3.00 is imposed.

A graduate student must prepare each quarter a program satisfactory to his major professor and approved by the Chairman of the Graduate School. The student will then go to the office to pay the fees that are due.

### **The Responsibility of Graduate Students**

The responsibility of course enrollment rests entirely upon the student. He should read the regulations carefully, and should follow them in all matters.

Members of the faculty are always ready to advise the student, and assist in planning his study program, but they are not responsible for enforcing the regulations of the Graduate School.

Credits secured in any way which does not comply with the regulations of the Graduate School will not be accepted to meet the requirements for a degree.

### **Changes in Study-Lists**

A graduate student is expected to plan his work so carefully that changes in his study-list during the Quarter will not be necessary. When a change is advisable, however, it may be permitted without fee if made within one week of the date of the registration. After that date a fee of one dollar is charged for each change.

### **Requirements for Master's Degree**

Candidates for the degree of Master of Science are required to do at least one year's work in residence. If the work is done during the summer session, a minimum of five six-weeks sessions of study and residence is required. A minimum of forty-

five quarter hours or thirty semester hours and a thesis will be required. Three quarter hours credit will be given for the thesis.

The graduate student will be required to meet a program of study leading to a definite objective. The mere completion of a stated amount of work does not entitle a candidate to be recommended for a degree. He must pass examinations upon such subjects and at such times as shall be designated by the department concerned.

### Thesis

A thesis based upon research in the major department is required of every candidate. The thesis must demonstrate the candidate's ability to do independent study and must be acceptable in literary style and composition. A thesis offered in partial fulfillment of the requirements for a Master's degree must be typewritten and bound according to specifications furnished by the Graduate School, and before it is accepted, it must be approved by the major professor under whose guidance the research has been done.

The candidate is required to pass an examination upon his or her thesis. The thesis must be turned over to the Chairman of the Graduate School at least two weeks before the examination can be held. Should the candidate fail to pass the examination, he or she will be required to spend an additional quarter in residence. Two copies of the thesis as approved by the major professor must be deposited in the College Library two weeks before graduation and its title, as approved by the major professor, will appear on the official commencement program.

### Scholarship

A minimum average grade of "B" must be maintained by the candidate. No credit will be given for grades below "C." Should a candidate receive two grades below "C," the student will be asked to discontinue his graduate work. A graduate student who fails in any course in his major subject cannot secure his degree in the same year in which the failure occurs. No conditional examination is given graduate students.

As designated under Description of Courses, the courses numbered 600-699 are for graduate students only. Courses numbered 500-599 are for graduates and advanced undergraduates.

### **Period of Registration for Degree**

It is desirable that graduate students complete the work for the Master's degree within a reasonable time. A candidate who does not complete this work within a period of six years from registration will be required to start anew to meet the requirements for the degree.

### **Candidacy for Master's Degree**

Admission to the Graduate School does not imply admission to candidacy for a degree. After a student has earned 15 quarter hours and before he has earned 21 quarter hours, he must appear before the committee to determine his fitness for an advanced degree.

### **Advisers**

The Chairman of the Graduate School appoints for each applicant for a degree an adviser.

The adviser shall be the professor in charge of the major subject who will direct the research for the thesis.

The student should secure the written approval of the adviser on all matters before asking for the approval of the Chairman of the Graduate School.

### **College Scholarships**

A limited number of scholarships have been provided by the college. The scholarships are open to students having a baccalaureate degree from an approved institution and have a value of \$270, with exemptions from all fees except the matriculation and student activity fee.

### **Fees**

The graduate student will pay five dollars when he matriculates and three dollars for each credit hour for all courses. A full time graduate student may elect to pay the same fee as an undergraduate.

### **Certification Regulations**

The North Carolina State Department of Public Instruction has issued the following requirements to be followed by those desiring a Master's degree and also a state graduate teaching certificate: These include two major groups (1) Teachers and (2) Principals and Supervisors.



**REQUIREMENTS FOR GRADUATE SECONDARY AND  
GRADUATE ELEMENTARY CERTIFICATES,  
EFFECTIVE AS OF JULY 1, 1941**

**I. Graduate Secondary Certificates:**

- A. Hold or be qualified to hold the Class A high school teachers' certificate.
- B. Have three or more years' training experience.
- C. Have a Master's degree from an institution of higher learning with recognized graduate standards approved by the State Department of Public Instruction. This would include:
  1. Subject matter in the certificate fields-----12 S.H.
  2. Education (philosophy, principles, curriculum,  
psychology, etc.) ----- 6 S.H.
  3. Electives -----12 S.H.

**II. Graduate Elementary Certificates:**

- A. Hold or be qualified to hold the Class A primary or grammar grade certificate.
- B. Have three or more years' teaching experience.
- C. Have a Master's degree from an institution of higher learning with recognized graduate standards approved by the State Department of Public Instruction. This credit would include:
  1. Academic work ----- 6-12 S.H.  
This should include subject matter in those fields in which there are manifest weaknesses in the equipment of the individual, as well as subject matter that would strengthen points already strong.
  2. Education (Philosophy, principles, curriculum,  
psychology, etc.) ----- 6 S.H.
  3. Electives -----12-18 S.H.

**REQUIREMENTS FOR PRINCIPAL'S CERTIFICATES,  
EFFECTIVE AS OF JULY 1, 1943**

- A. Hold or be qualified to hold the Class A teacher's certificate (secondary or elementary).
- B. Have three years' teaching experience within the past five years.
- C. Hold a Master's degree from an institution of higher learning with recognized graduate standards approved by the State Department of Public Instruction.
- D. Have credit for a minimum of 12 semester hours (18 recommended) of graduate work in Education selected from the following areas:
  1. Fundamental Bases of Education
    - a. The Curriculum, at least 2 semester hours required
    - b. Human Growth and Development
    - c. Social Foundations of Education



2. Instructional and Supervisory Techniques
  - a. Principles of Supervision, at least 2 semester hours required
  - b. Teaching Procedures
  - c. Guidance and Pupil Personnel and Accounting
  - d. Measurements
3. Organizations and Administration
  - a. High School Administration, at least 2 semester hours required
  - b. Elementary School Administration, at least 2 semester hours required
  - c. General Administration
  - d. School Plant
  - e. Staff Personnel
  - f. Community Relations

E. Electives \_\_\_\_\_ 12-18 semester hours  
 This elective credit may be of the candidate's choice, subject to such requirements as the institution may have for the Master's degree, but it should be designed primarily to add to one's equipment as a teacher.

### PROGRAM IN RURAL EDUCATION AND SOCIAL SCIENCE FOR TEACHERS AND PRINCIPALS

#### A. For teaching certificates

1. Required courses
 

Ed. 601 American Public Education	
or Educational Sociology _____	3 Q.H.
Ed. 622. Measurements and Evaluation _____	3 Q.H.
Ed. 612. Techniques of Research _____	3 Q.H.
Guid. 601. Field of Guidance _____	3 Q.H.
Ed. 621. Educational Psychology _____	3 Q.H.
Ed. 605. Teaching _____	3 Q.H.
Ed. 606. Curriculum _____	3 Q.H.
2. Subject-Matter courses according to certificate \_\_\_\_\_ 9-15 Q.H.
3. Electives and Thesis \_\_\_\_\_ 9-18 Q.H.

#### B. For Principals and Supervisors

1. Required courses
 

Ed. 601. American Public Education	
or Ed. 623 Educational Sociology _____	3 Q.H.
Ed. 622. Measurements and Evaluation _____	3 Q.H.
Ed. 612. Techniques of Research _____	3 Q.H.
Ed. 605. Teaching _____	3 Q.H.
Ed. 606. Curriculum _____	3 Q.H.
Ed. 609. School Planning _____	3 Q.H.
Ed. 626. H. S. Administration _____	3 Q.H.
Ed. 627. H. S. Supervision _____	3 Q.H.
Ed. 624. Elem. Sch. Administration _____	3 Q.H.
Ed. 625. Elem. Sch. Supervision _____	3 Q.H.
Guid. 601. Field of Guidance _____	3 Q.H.
Social Science _____	3 Q.H.
2. Electives and Thesis \_\_\_\_\_ 9 Q.H.

Programs in certain other graduate departments will be outlined on request, by the Major Professor of the department and the Chairman of the Graduate School.

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(See also Graduate Bulletin)

# DESCRIPTION OF COURSES

## AGRICULTURAL SCIENCES

### AGRONOMY

The Major in Agronomy is for those students who desire to go into the practical phases of agriculture dealing specifically with soils and crops. The groundwork is also laid for advanced study.

The major will prepare those students who are interested, for entering any one of the several types of Civil Service occupations in Agronomy.

All Freshmen or transfer students who plan to register for a major in Agronomy must first secure the approval of the Dean of the Department of Agriculture and the instructor in charge of the work. For Freshman and Sophomore curriculum, see page 50.

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Agronomy 132 -----	3 (2-2)	-----	-----
Zoology 111 or Botany 111 -----	-----	-----	5 (3-4)
Chemistry 121 -----	5 (3-4)	-----	-----
Economics 143, 142 -----	5 (5-0)	-----	5 (5-0)
Dairy 145 -----	-----	-----	4 (2-4)
Agronomy 133, 501, 131 -----	3 (2-2)	3 (2-2)	3 (2-2)
Rural Engineering 112 -----	3 (0-6)	-----	-----
Electives -----	-----	6 ( )	-----

#### Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Horticulture 123 -----	-----	-----	3 (2-2)
English 224 -----	-----	3 (2-0)	-----
Agronomy 534 -----	-----	-----	3 (2-2)
Agronomy 140, 144 -----	4 (2-4)	-----	3 (0-6)
Animal Husbandry 141 -----	3 (2-2)	-----	-----
Animal Husbandry 131 -----	3 (2-2)	-----	-----
Botany 123 -----	3 (2-2)	-----	-----
Rural Sociology 501 -----	-----	3 (3-0)	-----
Rural Engineering 124 or			
Horticulture 145 -----	-----	3 (1-4)	-----
Economics 501, 505 -----	-----	3 (1-4)	3 (3-0)
Horticulture 131, Electives -----	3 (2-2)	3 ( )	( )

Approved Electives for the Major in Agronomy. Other electives may be taken with the approval of the instructor in Agronomy.

**Fall**

English 231 or 224  
 Typewriting 317

Sociology 231  
 Geology 131

**Winter**

Rural Sociology 502  
 Economics 504  
 Geology 240

Agronomy 504, 523  
 M. E. 317  
 I. A. 325

**Spring**

Rural Engineering 133  
 Botany 121  
 Sociology 233

Rural Sociology 503  
 I. A. 326

**COURSES IN AGRONOMY****For Undergraduates**

**122. Nature and Properties of Soils.** The course deals with the origin, formation and classification of soils and their chemical relationships, also the chemical, physical and biological properties, with reference to composition and plant relations of soils. Fall. Prerequisite: Chem. 113. Credit 3(2-2).

**123. Soil Management.** This is a continuation of Agronomy 122, and it deals with the methods of soil utilization, including the methods of fertilization of soils, the mixing and applying commercial plant foods, the use of green manure, stable manure, lime and the influence of crop rotation and fertilizer on the soils as shown by field tests and experiments. Prerequisite: 122. Winter. Credit 3(2-2).

**131. Farm Crops.** This course consists of a study of the main field crops in North Carolina. It includes lectures and recitations together with appropriate laboratory exercises on these crops. Attention is paid in detail to the following phases of the subject: history, production, culture, harvesting, uses, State-approved varieties. Prerequisite: 123. Spring. Credit 3(2-2).

**132. Forage Crops.** This course supplements the course Agronomy 131. It covers the major forage crops adapted to North Carolina. Some phases of the field covered are crops adapted to the State, selection of forage crops, selection and preparation of land for forage crops, emergency forage production, making and curing hay, making and preserving silage, production and management of pastures. Laboratory work includes identification of forage crop seeds and forage crop materials in both the growing and cured stages. Prerequisite: 123. Fall. Credit 3(2-2)

**133. Advanced Crops.** This course supplements the course, Agronomy 131. It consists of a study of cotton and tobacco. It covers the following aspects of the field: history, varieties and adaptation of crops, selection of land and fertilizers, cultural practices in production, place in the rotation and soil conservation plan. Laboratory will consist of

study of seed quality, seed judging, and identification of field crops by vegetative and fruiting parts. Prerequisite: 131. Spring. Credit 3(2-2).

**140. Soil Conservation.** This course is a study of the nature, causes, occurrences and importance from an economic standpoint, of soil erosion. Attention is given to the several phases of soil conservation as counter-checks against erosion, farm planning, land use planning, reforestation, terracing, strip cropping, contour farming and crop adaptations. Field trips will be arranged for study and practice on actual problem cases. A fee may be charged at the discretion of the instructor, to pay for transportation. Prerequisite: 122, 123, 131. Fall. Credit 4(2-4).

**144. Farm Experiences.** This course will provide the student with practical participating farm experiences on the College Farm until he can demonstrate reasonable skills in the more commonly met farm activities as: care of workstock, harnessing workstock, care and repair of harness, repair of farm machinery, operation of farm tools and machinery including the tractor, laying out fields and the use of various tools in common cultivation activities. All Agronomy majors must register for the course and demonstrate efficiency to the satisfaction of the Farm Superintendent, who will be in charge of the work. Any part of this work may be waived at the decision of the Farm Superintendent. Prerequisites: 122, 123, 131. Spring. Credit 3(0-6).

#### Graduates and Advanced Undergraduates

**501. Soil Development and Classification.** A course dealing with the influence of soil-forming agencies on soil characteristics. Prerequisite: 123. Winter. Credit 3(2-2).

**502. Crop Problems.** For students wishing to study special problems in crops that are not considered as original research. Prerequisites depend on problem assigned. Senior standing. Credit and quarter to be arranged.

**503. Soil Survey.** The making of detailed soil maps and the writing of soil survey reports. Prerequisite: 123. Spring. Credit 4(2-4).

**504. Fertilizers.** A study of the sources, manufacture, characteristics, and utilization of fertilizers; calculation of formulas. Prerequisites: 123, 131. Winter. Credit 3(2-2).

**521. Soil Problems.** For students wishing to study special problems in soils that are not considered as original research. Prerequisites depend on problem assigned. Senior standing. Credit and quarter to be arranged.

**523. Crop Judging.** A course dealing with a study of those points which should be considered in judging farm crops, and the characteristics necessary for identification of crop and weed seed. Laboratory will consist of practice in arranging and judging of crop and weed seed exhibits. Prerequisite: 131. Credit 3(1-4).

**531. The Soils of North Carolina.** The origin, characteristics, plant adaptation, and fertilizer needs of North Carolina soil types. Prerequisite: 123. Credit 3(2-2). Quarter by arrangement.

**534. Crop Breeding.** Principles of plant breeding reviewed and applied to the principal North Carolina field crops; hybridization, and breeding for special qualities. Prerequisites: 131, 132, 133. Credit 3(2-2). Quarter by arrangement.

### Graduates Only

**601. Research in Crops.** Special problems chosen by the student or assigned by the instructor. Credit and quarter to be arranged.

**602. Research in Soils.** Special problems chosen by the student or assigned by the instructor. Credit and quarter to be arranged.

## MAJOR IN ANIMAL HUSBANDRY

### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
An. Husb. 131, 132 -----	5 (3-4)	3 (2-2)	3 (2-2)
Elective -----	-----	6 ( )	-----
Dairy 132, 146 -----	5 (3-4)	4 (2-4)	-----
Agron. 131, 132 -----	3 (2-2)	-----	3 (2-2)
Bact. 123 -----	-----	-----	-----
Econ. 231, 142 -----	5 (5-0)	-----	5 (5-0)
Botany 121 -----	-----	-----	3 (2-2)

### Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
An. Husb. 134 -----	3 (3-0)	-----	-----
Zool. 134 -----	3 (3-0)	-----	-----
An. Husb. 141 -----	3 (2-2)	-----	-----
*Electives -----	-----	-----	9 ( )
Hort. 133 -----	-----	4 (2-4)	-----
Econ. 232 -----	-----	5 (5-0)	-----
Poultry 133 -----	-----	3 (2-2)	-----
Botany 123 -----	3 (2-2)	-----	-----
Econ. 143 -----	5 (5-0)	-----	-----
Rural Eng. 141, 142 -----	-----	3 (2-2)	3 (0-6)
Special Problems -----	-----	-----	3 (0-6)

\*Electives for animal husbandry majors: business administration 335, 339 and as indicated for agricultural students.

## COURSES IN ANIMAL HUSBANDRY

### For Undergraduates

**121. Principles of Dairying.** This course takes up secretion, composition, testing and separation of milk; the farm manufacture of cheese, butter and ice cream. Credit 5(3-4).



- 122. Farm Animals.** A study of general farm animals. Special attention is given to sheep, horses, mules and beef cattle. The different breeds of the animals named as well as their care and management will be considered. Winter. Credit 3(2-2).
- 131. Diseases of Farm Animals.** This course deals in a general way with the following phases of animal diseases: causes, prevention, treatment, manner of spread, disinfectants and their application, general hygiene, stable sanitation and the location of site including drainage will be given. Prerequisite: 122. Fall. Credit 3(2-2).
- 132. Animal Nutrition.** This is a study of the general principles of nutrition as applied to livestock, composition of feed stuffs, comparisons of feeding standards, calculating rations, methods of feeding for economical production. Prerequisite: 122. Fall. Credit 5(4-3).
- 133. Animal Breeding.** A study of the principles of genetics as applied to the improvement of farm animals, and some of the methods and problems of the breeder. Prerequisites: 122, 131. Credit 3(3-0).
- 134. Feeding of Dairy Cattle.** A study of special problems pertaining to the feeding of dairy cattle; feeding for high market production; practices in balancing rations. Prerequisite: 132. Credit 5(4-2).
- 141. Swine Production.** A study of practical hog raising stressing such points as breeds, breeding, selecting breeding stock; feeding, diseases, insects, pest and sanitation. Prerequisites: 122, 131. Fall. Credit 3(2-2).
- 145. Practical Dairying.** A study of dairy-barn construction, barn sanitation, a study of dairy breeds, milking, fittings, and showing cows. Prerequisite: 122. Spring. Credit 4(2-4).
- 146. Dairy Herd Management.** A course in feeding and management of the dairy herd. It includes a study of pedigrees, handling test cows, advanced registration, fitting cows for show and for sale. Credit 4(2-4).

#### Graduates and Advanced Graduates

- 502. Farm Meats.** The course includes killing, dressing, cutting, curing and smoking, sausage making and meat inspection. Trips will be made to the City Abattoir to supplement work done at the college. Prerequisite: 122. Fall. Credit 3(1-4).
- 504. Ice Cream Making (formerly Dairy 132).** A study of the manufacturing of ice cream, sherbets and ices on a private or commercial scale, marketing and scoring and judging. Prerequisite: 122. Spring. Credit 5(3-4).
- 512. Marketing Livestock.** Developments and markets including the packing industry, methods of marketing and factors affecting receipts and prices of market animals. Credit 3(2-2).
- 513. Advanced Livestock Judging.** Advanced judging of horses, cattle, sheep and swine; history, purposes and organization of breeding associations; use of herd books; tabulations and a study of pedigrees; the work and methods of constructive breeders. Credit 3(2-2).

- 514. Anatomy and Physiology of Domestic Animals.** A study of viscera, general physiology and pathology. Credit 3 (2-2).
- 515. Dairy Bacteriology.** The significance and classification of bacteria in milk and milk products and laws relating thereto; equipment and methods used in laboratories. Interpretation of bacterial counts and milk and its products. Prerequisite: Bact. 121. Fall. Credit 3 (2-2).
- 521. Problems in Dairy Technology.** Technical problems relating to the manufacture of dairy products; methods of experimentation. Credit 3 (2-2).
- 522. Advanced Animal Nutrition.** The principles and facts of the science of animal nutrition and economic feeding practices, with special attention to recent discoveries pertaining to quality in the protein, mineral requirements and the vitamins. Credit 3 (2-2).
- 526. City Milk Supply.** The phases of the City Milk Supply from the standpoint of the Milk Inspector and the Board of Health; the methods and processes used in a central pasteurizing milk distribution plant and the dairymen supplying milk to same; the raw retail milk distributor and his problems. Prerequisite: 505. Winter. Credit 3 (2-2).

### For Graduates Only

- 601. Research Studies in Animal Husbandry.** An intensive study and experimental data. Time and credit to be arranged.
- 602. Special Problems in Dairy Husbandry.** Available for graduate students interested in such special dairy problems under definite supervision and approval. Time and credit to be arranged.
- 603. Seminar.** Members of the Seminar will be assigned subjects which will be reviewed and discussed. Review of literature, scientific reports and experimental station bulletins. Oral and written reports. Time and credit to be arranged.

## MAJOR IN POULTRY

### Junior

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
An. Husb. 132 -----	3 (2-2)	-----	-----
Electives -----	-----	6 ( )	-----
Dairy 134, 145, 146 -----	5 (4-2)	4 (2-4)	4 (2-4)
Agronomy 131, 132 -----	3 (2-2)	-----	3 (2-2)
Bacteriology 123 -----	-----	-----	5 (3-4)
Economics 231, 142 -----	5 (5-0)	-----	5 (5-0)
Botany 121 -----	-----	-----	3 (2-2)
Math. 316 -----	3 (3-0)	-----	-----

## Senior

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Poultry 501, 505 -----	3 (2-2)	3 (2-2)	-----
Zoology 134 -----	3 (3-0)	-----	-----
Electives -----	-----	-----	6 ( )
Hort. 123 -----	-----	4 (2-4)	-----
Economics 232 -----	-----	5 (5-0)	-----
Poultry 531 -----	-----	-----	3 (2-2)
Botany 123 -----	3 (2-2)	-----	-----
Economics 143 -----	5 (5-0)	-----	-----
Rural Eng. 141, 142 -----	-----	3 (2-2)	3 (0-6)
Poultry 502, 503, 504 -----	3 (2-2)	3 (2-2)	3 (2-2)

## COURSES IN POULTRY SCIENCE

## For Undergraduates

**111. General Poultry Problems.** A general introductory course that is very practical for those who plan to raise or teach poultry. It stresses such phases of the industry as plant location, selection of site, plant equipment, foods and feeding, flock care, culling, sanitation, insects and diseases. Fall. Credit 3 (2-2).

**122. Operation of the Poultry Plant.** Attention will be paid to such factors in economy as the selection and equipment, use of equipment, making simple equipment, cost of equipment, feeding systems, compounding rations, utilizing home-grown products in the rations with practical cost study problems. Winter. Credit 3 (2-2).

**122. Incubation and Brooding.** The embryology of the chick, then a more detailed study of the theory and actual practice of incubator operation, studies in the construction and operation of different types of incubators and brooder stoves. The chick, its care and management through the first four weeks. Prerequisite: 112. Winter. Credit 3 (2-2).

## For Graduates and Advanced Undergraduates

**501. Marketing Poultry Products (formerly Poul. 133).** A study of the theory and practice in classifying, handling, grading and preserving eggs; fattening chickens, handling and dressing. The baby chick business in market. Prerequisite: 112. Winter. Credit 3 (2-2).

**502. Poultry Problems (formerly Poul. 134).** Poultry disease problems, nutritional problems, judging problems. Prerequisite: 112. Time and credit to be arranged.

**503. Selection and Mating of Poultry.** Methods of recognition and selection for purpose of mating from both standard and utility standpoints. Study of progeny performance. Prerequisites: 112 and Zool. 134. Credit 3 (2-2).

- 504. Poultry Nutrition (formerly Poul. 131).** Feeds and feeding physiology of digestion, absorption and elimination; mineral and vitamin requirements. Fall. Credit 3(2-2).
- 505. Poultry Judging.** Class and practice work in standard and utility judging of fowls. Selection preparation, breeds for showing. Winter. Credit 3(2-2).
- 521. Poultry Diseases (formerly Poul. 130).** Sanitation, parasite infestation and control, contagious and non-contagious diseases of the fowl. Winter. Credit 3(1-4).
- 522. Poultry Anatomy.** A study of normal structure of the fowl, including osteology, arthrology, myology, splanchnology, angrology, enurology and oesthiology. Prerequisite: 502. Spring. Credit 3(2-2).
- 531. Commercial Poultry Plant Management.** A study of poultry farm organization and management; hatchery management; the economics of the poultry industry and factors influencing profit in poultry enterprises. Prerequisite: 112. Spring. Credit 3(2-2).

### Graduates Only

- 601. Production Studies and Experiments.** Problems in poultry nutrition, breeding and commercial poultry production and marketing. Time and credit to be arranged.
- 602. Poultry Research.** Problems chosen or assigned. Time and credit to be arranged.
- 603. Seminar.** Problems vital to the poultry industry will be discussed by the students and members of the staff. Time and credit to be arranged.

### MAJOR IN ORNAMENTAL HORTICULTURE

#### Junior

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Econ. 143, 142 -----	5 (5-0)	-----	5 (5-0)
Agri. 131 -----	3 (2-2)	-----	-----
Bot. 121 -----	-----	-----	3 (2-2)
Art 311, 312, 313 -----	3 (0-6)	3 (0-6)	3 (0-6)
R. Eng. 112 -----	3 (1-4)	-----	-----
Hort. 131, 133 -----	3 (1-4)	-----	3 (2-4)
Farm Records 501 -----	-----	5 (5-0)	-----
Elective -----	3 ( )	3 ( )	3 ( )
Elective -----	-----	3 ( )	-----

## Senior

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Bus. 237 -----	5 (5-0)	-----	-----
Bot. 123 -----	4 (2-4)	-----	-----
Hort. 141, 142, 143 -----	3 (1-4)	3 (1-4)	3 (1-4)
Hort. 144, 145, 146 -----	3 (2-2)	3 (1-4)	4 (1-6)
R. Eng. 141, 142, 143 -----	3 (2-2)	3 (2-2)	3 (0-6)
Electives -----	-----	6 ( )	-----

## COURSES IN HORTICULTURE

- 111. The Elements of Horticulture.** An elementary course in general horticulture dealing with fruit, vegetables, flower growing, and practical landscape problems of small properties. This course will enable the beginning student to get an appreciation as well as the principles of the science of horticulture. Two lecture periods and one laboratory period. Fall, Winter, and Spring. Credit 3 (2-2).
- 112. Flower Arrangement.** This course is designed to teach the student the use of flowers and plant materials in the home, store, school and office decoration. Lecture period each week. Credit 3 (1-4).
- 113. Vegetable Growing.** This is a study of the general principles involved in vegetable growing. The student will be given an opportunity to carry out some of the principles taught through practical work in assigned plots of which he will have full charge. He will be required to plan, plant and cultivate the assigned plot. Spring. Credit 4 (2-4).
- 122. Plant Growing.** This is a study of the general principles involved in fruit growing. Consideration will be given to the establishment of commercial orchard establishments. The course will be comprised of a study of locations, sites, soils, fruit varieties, pruning and spraying, and the general practices involved in general orchard management. The importance of the home orchard will also be emphasized. Fall. Credit 3 (2-2).
- 123. Flower Growing.** This is a study of the general principles involved in amateur flower growing. The course will be comprised of a study of annuals, biennials, perennials, bulbs, roses, and shrubs that are valuable for the home flower garden. Practical experience will be given in planning, planting, and caring for an assigned flower bed. Prerequisite: Hort. 133. Spring. Credit 3 (2-2).
- 124. Flower Growing.** This course is designed to further the student's knowledge in specialized flower growing. Attention will be given to detailed development of the private area. Prerequisite: 123. Fall. Credit 3 (2-2).
- 131. Plant Materials and Propagation.** This course will include the identification of trees, shrubs and vines of North Carolina. The laboratory work will be done largely in the field. The use of these materials in simple landscaping will be stressed. Methods of grafting, budding, seeding, and the making of cuttings will be practiced during the laboratory periods. Fall. Credit 3 (2-4).



- 133, 134. Landscape Architecture.** This course gives a general survey of the principles of the art of beautifying the home and farm grounds as well as the community and public buildings. Laboratory work will consist of practical work in landscaping projects about the campus and community. Landscaping as a commercial enterprise will be emphasized. Spring. Credit 4(2-4) each quarter.
- 141, 142, 143. Greenhouse Management.** This course is designed for such students who desire to enter into commercial enterprises rather than teaching. The course of study will involve the principles of year-round management of a greenhouse establishment, floral arrangement and merchandizing, interior decorations with flowers and plants, soil management, greenhouse heating, ventilation, watering, and general plant culture. Prerequisite: Hort. 123, 131. Fall, Winter and Spring. Credit (each quarter) 3(1-4).
- 144. Systematic Horticulture.** The course consists of a study of the characteristics of various varieties of fruits and vegetables in an effort to determine the merits of each variety in its relation to growing conditions and market demands. Fall. Credit 3(2-2).
- 145. Horticultural Buildings.** This course consists of the study of the construction of various buildings needed for horticultural enterprises. Hot beds, cold frames, nursery frames, greenhouses, storage houses, packing houses will receive special attention. Winter. Credit 3(1-4).
- 146. Special Project.** The student will select some problem after consultation with the instructor and will plan and execute research under supervision. Research reading will be required. The results of the research will be incorporated in a thesis at the end of the quarter. Students in this course must have shown considerable aptitude in all of the horticultural courses. Quarter to be arranged. Credit 4(1-6).

### COURSES IN RURAL ENGINEERING

- 111. Farm Math** (Formerly Agriculture Practice 111). This course is designed to strengthen the student in the fundamentals of Farm Mathematics. The course will include such problems as fertilizer estimations, farm buildings, land measurements, and other calculations. Fall, Winter or Spring. Credit 3(2-2).
- 112. Agricultural Drawing.** This course is designed to give students practice in using drawing instruments in lettering and detailing as applied to farm buildings, surveying and mapping. Fall, Winter or Spring. 3(0-6).
- 124. Farm Buildings.** This course includes the fundamentals of building construction as applied to locations, selection of materials, foundations and framings. Fall, Winter or Spring. 3(1-4). Prerequisite: Farm Math. 111.
- 132. General Farm Shop** (Formerly 141 Introduction of Farm Shop and formerly Ru. Eng. 121). A course designed to develop skills and operation practice in general woodwork, tool fitting, concrete, plumbing, for the farm, cold metal work. Fall, Winter, Spring. 3(0-6). Prerequisite: Farm Math. 111.



- 133. General Farm Machinery** (Formerly 142 Equipment, Materials, and Methods of Teaching in a Program of Voc. Agriculture and formerly Ru. Eng. 122). A course designed to give types of Farm Machinery in use and the general application of each. Capacity of field machines, cost of operating farm equipment. Selection of farm machinery, care, adjustment and repair. Fall, Winter. 3(0-6). Prerequisite: Ru. Eng. 111, 132.
- 143. Observation and Directed Practice Teaching in Farm Shop.** (Formerly Ru. Eng. 123.) This course is taken with practice teaching. Trainees are assigned to various training centers to carry out the practice work in keeping with the National Vocational Acts. Spring quarter. 3(0-6). Prerequisite: Ru. Eng. 111, 132, 133.
- 500. Farm Surveying and Drainage.** The course includes work with tape, levels, and the transit. Field work and practice in topography will be assigned as special problems. Fall or Spring. 3(1-4).

## COURSES IN AGRICULTURAL ECONOMICS AND RURAL SOCIOLOGY

### Agricultural Economics

#### For Undergraduates

- 114. Rural Social Economy.** A general course designed to give the student a basic philosophy of the economics of agriculture and rural life. Fall. Credit 3(3-0).
- 115. Farm Organization and Management.** The purpose of this course is to give the student a basic understanding of the organizational, managerial, and marketing problems involved in the successful operation of the farm business. Prerequisite: Econ. 114. Credit 3(3-0).
- 142. Farm Management.** A study of the factors of production as they relate to the individual farm; systems of farming, their distribution and adaptation; problems of labor, machinery, layout of farms, crop and livestock selection, and rotation systems. Spring. Credit 5(5-0).
- 143. Marketing Farm Products.** A study of the economic principles underlying successful marketing of farm products, market organizations and control, price-making forces and critical examination of the present system of marketing farm products. Fall. Credit 5(5-0).

#### For Graduates and Advanced Undergraduates

- 501. Farm Records.** Methods and practice of taking and keeping farm inventories, feed records, crop records, simple financial statements, and analysis and the interpretation of results obtained from farm business transactions. Prerequisite: 142. Credit 3(1-4).
- 502. Rural Law.** Classification of farm property; study of farm boundaries, fences, stock law, rents, contracts, deeds, abstracts, mortgages, taxes, and laws governing shipping of farm products. Prerequisite: 142. Credit 3(3-0).

- 503. Advanced Farm Management.** A further study of the principles of farm organization and management as applied to typical regions of North Carolina. Occasional field trips will be made to study successful farms. Prerequisite: 142.
- 504. Farm Cost Accounts.** Construction and interpretation of cost accounts; relation of cost to price. Cost of production studies and the interpretation of results; closing and analyzing a set of farm cost accounts.
- 505. Principles of Cooperation.** A study of the principles underlying cooperative endeavor. Experiences of cooperative associations of farmers are used as illustrative material. Credit 3(3-0).
- 506. Marketing Methods and Problems.** A careful study of the problems and methods involved in marketing of farm products. Suggestions for improvement will be stressed. Credit 3(3-0).
- 507. Agricultural Finance.** Principles involved in financing the production and marketing of agricultural products. Consideration of farm mortgage credit, personal and intermediate credit, and agricultural taxation. Credit 3(3-0).
- 508. Agricultural Statistics.** Statistical methods and their application. Frequency distribution, averages, measurements of variation, their reliability, trend and linear correlation. Classification, tabulation, and graphic representation. Credit 3(3-0).

#### For Graduates Only

- 602. Economics of Agricultural Production.** Economic theories applicable to horticulture. The nature and characteristics of the factors of production, the law of variable proportion, the law of diminishing return, and the theory of least cost. Credit 3(3-0).
- 602. Farm Organization and Management.** The extension of the economic principles discussed in Agricultural Economics 503 and the application of these principles to the problems of farm organization and management. Credit 3(3-0).
- 603. Land Economics.** The economic problems of land classification, ownership and acquisition of land, tenancy and land ownership, the functions of the land lord and the tenant, land valuation and specification. Credit 3(3-0).
- 604. Current Problems in Agricultural Economics.** The content of this course will be changed from year to year. Important problems vital to agriculture will be studied as they develop; topics prepared and presented by students and staff members. Credit 3(3-0).
- 605. Research in Agricultural Economics.** A consideration of the research method and procedure now being employed by research workers in the field of Agricultural Economics, with special application to farm management and marketing. Credit 3(3-0).

### Rural Sociology Courses for Undergraduates

- 233. Rural Home Life.** A survey of the home life of Negroes living on farms and in rural communities, including means and methods of improvement, field and observation tours, will be given in this course. Prerequisite: Soc. 231 or consent of instructor. Credit 5(3-4).

### For Advanced Undergraduates and Graduates

- 501. Rural Social Problems.** This course will explore the development and functioning of basic rural social institutions, cultural backgrounds, standards and methods as related to cooperative effort and social change. Prerequisite: Soc. 231. Credit 3(3-0).
- 502. Rural Leadership.** Specific problems of rural life as selection, development, tasks, obligations and opportunities of rural leadership will constitute the scope of this course. Prerequisite: Soc. 231. Credit 3(3-0).
- 503. Community Organization.** Community organization, with special reference to organization among rural Negroes is studied in this course. Attention is given to proposed programs of improvement. Graduate students will carry a special problem as a supplement to the regular course work. Prerequisite: Consent of Instructor. Credit: Undergraduate, 3(3-0); Graduate, 4(3-2).
- 504. Research in Rural Sociology.** Research problems in population, community organization, family life, standards of living, social attitudes, etc., will be investigated by the student in this course. Attention is also given to the methodology of contemporary research in these fields. Prerequisite: Consent of Instructor. Credit 3(3-0).
- 505. Seminar.** The structural characteristics and classification of different types of rural social groups as related to their functions are studied. Prerequisite: Consent of Instructor. Credit 3(3-0).

## AGRICULTURAL EDUCATION AND VOCATIONAL AGRICULTURE

- 141. Materials and Methods of Teaching Vocational Agriculture.** This course includes principles of teaching with application to Vocational Agriculture, the requirements of teacher responsibilities, objectives of Vocational Agriculture, student motivations and directed study. Making lesson plans and other teaching devices to meet individual and community needs will be included. Credit 5(5-0). Prerequisite: Ed. 231, 237, 238. (Formerly Ed. 141-144).
- 142. Observation and Directed Practice Teaching in Vocational Agriculture.** In this course, students are assigned to training centers for observation and directed teaching during the quarter. The trainers must submit all material to the critic teacher of the assigned department for his approval before use. Credit 5(5-0). Formerly 143, 146.

**143. Problems and Principles of Vocational Agriculture.** This course includes finding problems and principles in Vocational Agriculture and working out desirable solutions; on the other hand evaluation of the materials and practices and the building of the community programs will represent some of the basic activities in the course. Credit 5(5-0). Prerequisite: Ed. 141, 142.

**148. Extension Service.** A study of the developments of the Agricultural Extension Service in the United States, with special reference to the status of this service among the Negroes in the Southern States; also a study of the rules, regulations and special methods relative to this work in North Carolina. Prerequisite: All work below senior year. Fall. Credit 5(5-0).

**149. Practice in Extension Service.** This course follows Education 148 and gives the trainee an opportunity to practice some of the special methods considered in the previous course. Prerequisite: Ext. Ed. 178. Winter. Credit 5(0-10).

**180. Extension Problems.** This course deals with special problems in extension. Prerequisite: Ext. Ed. 149. Winter. Credit 3(0-6).

### SUGGESTED GRADUATE MAJOR IN AGRICULTURAL EDUCATION

Agricultural Ed. 501. Evening School and Part-Time Work	Credits 3(3-0)
Agricultural Ed. 502. Problem Teaching in Vocational Ag.	Credits 3(3-0)
Agricultural Ed. 505. The Principles of Agricultural Ed.	Credits 3(3-0)
Agricultural Ed. 505. Guidance and Group Instruction	Credits 3(3-0)
Agricultural Ed. 601. Administration and Supervision	Credits 3(3-0)
Agricultural Ed. 602. Curriculum Construction in Vocational Agriculture	Credits 3(3-0)
Agricultural Ed. 604. Community Problems in Agriculture	Credits 3(3-0)
Agricultural Ed. 605. Problems in Educational Psychology	Credits 3(3-0)
Agricultural Ed. 521. Philosophy of Vocational Education	Credits 3(3-0)
Agricultural Ed. 606. Research in Education	Credits 3(3-0)
(Thesis 5-10 hours)	

Major 30 hours, minor 15 hours. A split minor may be taken making a major and minor 45 hours.

**For Graduates and Advanced Undergraduates**

- 501. Evening School and Part-Time Work.** This course deals with the principles and problems of setting up and directing adult groups and out-of-school groups; collecting and arranging materials for evening class instruction shall be given considerable space in the course. Credit 3 (3-0).
- 502. Problem Teaching in Vocational Agriculture.** This course shall consist of setting up problems for teaching unit courses in Vocational Agriculture. Credit 3 (3-0).
- 503. The New Farmers of America.** This course shall consist of a study of the practice and policies of setting up local, district and state organizations. Special space will be given to training the officers and members to perform. Credit 3 (3-0).
- 504. The Principles of Agricultural Education.** Consideration of the Principles and Practices in Agricultural Education in keeping with the research and present trends. Credit 3 (3-0).
- 505. Guidance and Group Instructions.** Group instructions applied to agricultural occupations, guidance and counseling with special reference to pupils in Vocational Agriculture. Credit 3 (3-0).

**For Graduates Only**

- 601. Administration and Supervision.** Administrative and Supervisory problems of Vocational Agriculture. This course consists of a study in the practices and policies of local, State and Federal problems dealing with administration and supervision of Vocational Agriculture. Credit 3 (3-0).
- 602. Curriculum Construction in Vocational Agriculture.** Building Unit Courses in Vocational Agriculture and selecting subject matter to use with the course along with the common problem evaluating the content of the course. Credit 3 (3-0).
- 603. History of Vocational Agriculture.** A brief review of Vocational Education in Europe and America. Special space to be given to the Vocational Agriculture as it is developed in the United States. Credit 3 (3-0).
- 604. Community Problems in Agriculture.** This course shall consist of finding the common problems of the community that relate to Agriculture and developing desirable solutions for said problems. Credit 3 (3-0).
- 606. Research in Vocational Education.** The student will make a study of one or more research problems under the supervision of some member of the Staff of the Vocational Education Division. Credit 3 (3-0)



## GEOLOGY

**131. General Geology.** A general discussion of geologic forces and their results, dealing chiefly with the principal facts of the science with reference to the agencies affecting changes in the earth's form. The course includes a study of composition of the earth, soil-forming minerals and characteristics. Rocks and their identification, weathering, residual soil formed from various rocks. The work of winds, ground water streams and their work, illuvial deposits. Glaciation of glacial soils, oceans, lakes and inland waters, together with interpretation of geologic and soil maps. Fall or Winter. Credit 5 (4-2).

## DEPARTMENT OF ARCHITECTURAL ENGINEERING

The objective of the course in architectural engineering is to provide a sound training in subjects basic to the engineering design and construction of buildings.

In order that the students may acquire self-reliance, they are increasingly thrown upon their own resources as they advance from year to year.

In recognition of the many directions toward which an architectural education may guide students in this field, the Department of Architectural Engineering announces that electives in related work may be chosen by students of good standing with the approval of the Head of the Department in substitution of suggested electives.

The course of architectural engineering covers four years and leads to the degree of Bachelor of Science in Architectural Engineering.

### Freshman Year

(See First Year's Curriculum of Mechanic Arts, page 55.)

### Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Working Drawings, A. E. 334_____	3 (0-6)	-----	-----
Timber Construction, A. E. 335_____	-----	3 (0-6)	-----
Masonry Construction, A. E. 336_____	-----	-----	3 (0-6)
General Physics, Physics 321, 322, 323_____	5 (3-4)	5 (3-4)	5 (3-4)
Mathematics, Math. 321, 322, 323_____	5 (5-0)	5 (5-0)	5 (5-0)
Military Science, M. S. 321, 322, 323_____	2 (2-2)	2 (2-2)	2 (2-2)
Arch. Design, A. E. 321, 322, 323_____	4 (1-8)	4 (1-8)	4 (1-8)
	<hr/> 19 Hrs.	<hr/> 19 Hrs.	<hr/> 19 Hrs.

### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Mechanics, M. E. 331, 332, 333_____	5 (5-0)	5 (5-0)	5 (5-0)
Arch. Design, A. E. 331, 332, 333_____	5 (0-10)	5 (0-10)	5 (0-10)
History of Arch., Art 324, 325, 326_____	5 (5-0)	5 (5-0)	5 (5-0)
Heating and Ventilating, M. E. 334, 335_____	3 (0-6)	3 (3-0)	-----
Perspective, A. E. 324 _____	-----	-----	3 (3-0)
Freehand Drawing, Art 311, 312, 313_____	3 (0-6)	3 (0-6)	3 (0-6)
	<hr/> 21 Hrs.	<hr/> 21 Hrs.	<hr/> 21 Hrs.



## Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Arch. Design, A. E. 341, 342, 343-----	5 (0-10)	5 (5-10)	5 (5-10)
Concrete Design, A. E. 345-----	-----	-----	4 (3-2)
Architectural Practice, A. E. 346-----	-----	2 (4-0)	-----
Materials of Construction, I. A. 324-----	3 (3-0)	-----	-----
Surveying, Math. 324-----	-----	-----	3 (1-4)
Electives <i>EE 321 322</i> -----	4 Hrs.	10 Hrs.	-----
Contracts and specifications, M. E. 327-----	-----	-----	3 (3-0)
Structures, A. E. 340-----	5 (5-0)	-----	-----
<i>EC 231 234</i>	-----	-----	-----
	18 Hrs.	17 Hrs.	15 Hrs.

## Suggested Electives

French	Commercial Law 335
English	Economics 231, 232, 234
Testing Materials, M. E. 346	Electric Wiring, I. A. 326

## COURSES IN ARCHITECTURAL ENGINEERING

- 321. Design.** Problems are given in architectural design of small domestic buildings. Prerequisite: M. E. 312. Credit 4(1-8).
- 322. Design.** Modeling of small buildings and landscaping is offered. Prerequisite: A. E. 321. Credit 4(1-8).
- 323. Design.** Advanced domestic buildings requiring the elements of planning for multiple uses, such as flats and apartments. Prerequisite: 322. Credit 4(1-8).
- 324. Perspective.** Drafting principles of architectural perspective in parallel, angular, and aerial views are offered. Prerequisite: M. E. 324. Credit 3(0-6).
- 331. Design, Laboratory Work.** A series of problems in architectural composition and structural details is offered. Prerequisite: A. E. 323. Credit 5(0-10).
- 332. Design, Laboratory Work.** This course is a continuation of 331 emphasizing the design of small public buildings such as stores and cafeterias. Prerequisite: A. E. 331. Credit 5(0-10).
- 333. Design, Laboratory Work.** A continuation of 332. Designs of department stores and bank buildings. Prerequisite: A. E. 331. Credit 5(0-10).
- 334. Working Drawings.** Analyzing and drawing of architectural and structural engineering details. Prerequisite: A. E. 333. Credit 3(0-6).
- 335. Timber Construction.** This course deals with the fundamentals of Construction as it applies to Building with emphasis being placed on drawing of details. The economical use of timber construction, such as Girder roof and Laminated Members. Prerequisite: 334. Credit 3(0-6).

- 336. Masonry Construction.** Footing foundation and walls are treated in this course. Various types of footings for building foundations and wall construction are studied. Prerequisite: 335. Credit 3(0-6).
- 340. Structures.** A course in which is grouped the analytical and graphical determination of stresses in framed structures. Prerequisite: M. E. 333. Credit 5(5-0).
- 341. Laboratory Work with Individual Criticism.** Industrial engineering designs are studied. Studying structural details such as, plate girder and simple roof trusses of wood and steel. Prerequisite: A. E. 333. Credit 5(0-10).
- 342. Laboratory Work with Individual Criticism.** This course involves the selection of the design and presentation of a special project selected by the instructor. Prerequisite: A. E. 341. Credit 5(0-10).
- 343. Laboratory Work with Individual Criticism.** A collaborative problem is assigned. This involves the selection of the design and presentation of a special project selected by the instructor. Prerequisite: A. E. 342. Credit 5(0-10).
- 345. Concrete Design.** Lecture and recitation. theory and design of reinforced concrete as applied to columns, beams and slabs for commercial buildings. Prerequisite: A. E. 336. Credit 4(3-2).
- 346. Architectural Practice.** A study of procedure in architectural practice. Seminar. Prerequisite: A. E. 343. Credit 2(2-0).

## DEPARTMENT OF BIOLOGICAL SCIENCES

### Major in Biological Sciences

A minimum of ten quarter hours in the biological sciences is required for graduation in the School of Education and Sciences, ten in home economics, and twenty in agriculture.

The following is suggested for those who desire to complete a major in this field of study. This major is recommended for those persons who wish to enter the field of teaching, research, the medical profession or government service.

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
General Physics, Physics 321, 322, 323-----	5(4-2)	5(4-2)	5(4-2)
General and Organic Chemistry			
Chem. 113, 121, 122-----	5(3-4)	5(2-6)	5(2-6)
Plant Physiology, Botany 121-----	-----	-----	3(2-2)
Plant Diseases, Botany 123-----	-----	3(2-2)	-----
Hygiene, Phys. Ed. 233, 237-----	3(3-0)	-----	3(3-0)
Minor or Electives -----	5(3-4)	5(3-4)	2( )
	<hr/>	<hr/>	<hr/>
	18	18	18

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Anatomy and Physiology, Zool. 122-----	5 (3-4)	-----	-----
General Bacteriology, Bact. 123-----	-----	-----	5 (3-4)
Genetics, Zool. 142 -----	-----	3 (3-0)	-----
Histology, Zool. 132 -----	-----	5 (3-4)	-----
Embryology, Zool. 143 -----	-----	-----	5 (3-4)
Geography 240, 241 -----	-----	5 (5-0)	5 (5-0)
Minor or Electives -----	10 ( )	5 (3-4)	3 ( )
	15	18	18

**Major in General Science**

This major was designed to meet the needs of those who plan to teach science in the small high schools of North Carolina, that do not provide a special teacher in each branch of science, and require persons whose scientific training is less specialized but sufficiently versatile to teach all of the required science courses.

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
General Physics, Physics 321, 322-----	5 (4-2)	5 (4-2)	-----
General Science, 131, 132, or equivalent----	5 (4-2)	5 (4-2)	-----
Entomology, Zool. 133 -----	-----	-----	5 (3-4)
Hygiene, Phys. Ed. 233, 237-----	3 (3-0)	-----	3 (3-0)
Chemistry 113, 121, 122-----	5 (3-4)	5 (2-6)	5 (3-4)
Electives			

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Geography, Geog. 240, 2141-----	5 (5-0)	5 (5-0)	-----
General Bacteriology, Bact. 123-----	-----	-----	5 ( 3-4)
Minor or Electives -----	10 (10-0)	10 (10-0)	10 (10-0)
	15	15	15

**COURSES IN BACTERIOLOGY**

**123. General Bacteriology.** This course covers the preparation of culture media, isolation of bacteria, the study of morphological characteristics of typical bacteria, morphology of yeasts and molds, fermentation, the relation of bacteria to health of man, and the principles of disinfection and sterilization. Any quarter. Credit 5 (3-4).

**132. Agricultural Bacteriology.** The purpose of this course is to give the student a knowledge of the biological changes which are produced in both animal and plant products. Emphasis is placed on bacterial activities in the soil, their relations to soil fertility, and fermentation in dairy products. Winter. Credit 5 (3-4).

### COURSES IN ZOOLOGY

- 111. General Zoology.** This course gives a brief survey of the animal kingdom and deals with the morphology, physiology and taxonomy of the essential types of life. Emphasis is placed on the development from protozoa through metazoa. The various theories underlying evolution and the relation of environment to adaptive radiations are discussed. Laboratory work and movies supplement the lectures and class discussions. Any quarter. Credit 5(3-4).
- 122. Comparative Anatomy and Physiology.** The lectures on descriptive anatomy will cover the fundamentals from the preparatory point of view and will be illustrated by drawings, plates, models, skeletons and dissection. About one half of the time will be devoted to the study of anatomy. The study of physiology will be facilitated by lectures, demonstrations, movie films and suitable experiments. The study of the functions of the various organs and systems of organs will be emphasized. Winter quarter. Credit 5(3-4).
- 133. Entomology.** This course covers the fundamentals of insect structure, insect metamorphosis and development, the economic importance of insects to man, and methods of insect control. Practical methods applicable to farm and home are stressed. Spring quarter. Credit 5(3-4).
- 132. Histology.** This course deals with the microscopic structure of tissues of the body. A thorough study of the microscope and proper laboratory techniques are involved. Winter quarter. Prerequisites: Zool. 111 and 122. Credit 5(3-4).
- 142. Genetics and Eugenics.** This is a basic course in the study of the principles and mechanism of inheritance in plants, animals and man, and includes methods of improvement through selective breeding. Any quarter. Prerequisite: Zool. 111. Credit 3(3-0).
- 143. Embryology.** This course takes up the development, principles and processes of embryology, using vertebrate embryos. Germ cell origin and structure, maturation, fertilization, cleavage, differentiation, tissue formation and organogeny are covered. Spring quarter. Prerequisites: Zool. 111 and 122. Credit 5(3-4).

### Graduates and Advanced Undergraduates

- 501. Vertebrate Embryology.** This course deals with the comparative embryology of the principal groups of vertebrates. Prerequisite: 15 hours of zoology. Credit 5(3-4).
- 502. Advanced Genetics.** This is a continuation of the study of principles of heredity and variation affecting animals and plants. Credit 3(1-4).
- 503, 504. Advanced Histology.** This is a further study of animal tissues, their preparation, and microscopic technique. Credit 3(2-2) each quarter.

- 511, 512. Research in Zoology.** Special problems will be investigated through research and experimentation. Prerequisites: 30 hours in science with 15 hours in zoology. Credit 5(2-6) each quarter.

### Graduates

- 601. Special Problems in Insection Control.** This will cover investigation of practical problems in the control of insects affecting field crops, live-stock, garden, orchard and home. Credit 5(3-4).

### COURSES IN GENERAL SCIENCE

- 131. The Physical World.** This course is concerned with a survey of the whole field of science. It begins with a study of the universe as a background for understanding the earth and physical sciences and man's relationship with them, and closes with a consideration of those forces that have had greatest influence on human development. Summer or Fall. Credit 5(4-2).
- 132. The Biological and Chemical World.** This course is a continuation of General Science 131 and is especially concerned with (1) man and his relationship to the biological and chemical world, (2) how plant and animal life, and (3) how science and inventions have affected civilization. These courses are considered as a unit and both must be completed in order to receive credit. Summer or Winter. Credit 5(4-2).

### COURSES IN BOTANY

- 111. General Botany.** This course is intended to give the fundamental facts, functions and principles of plant life. Any quarter. Credit 5(3-4).
- 112. Plant Taxonomy.** This course is designed to give students information on the families, genera, species and varieties. The student will be able to identify plants in North Carolina and adjoining states by families and the binominal-nomenclature. Prerequisite: Botany 111. Any quarter. Credit 5(3-4).
- 121. Plant Physiology.** The plant is considered from the standpoint of activities; absorption and transportation of raw materials, manufacture, storage of food, growth and movement in response to stimuli. Prerequisite: 111. Spring. Credit 3(2-2).
- 123. Plant Diseases.** This course takes into consideration the most important diseases of the important southern crops. Prerequisites: 111, 121. Fall. Credit 3(2-2).
- 124. Plant Ecology.** Lectures on the vegetation of North Carolina with special reference to the plant association of the State. Prerequisite: 111. Quarter to be arranged. Credit 3(2-2).
- 125. Principles of Forestry.** Relation of forestry to agriculture and economics. Trips will be made to farm woodlots. Spring. Credit 3(3-0).



## DEPARTMENT OF BUSINESS ADMINISTRATION AND COMMERCIAL EDUCATION

During the first two years the student is expected to lay a broad foundation for later specialization. To secure this end the courses in the freshman and sophomore years have been so selected and grouped as to cover all the major fields of knowledge.

### Required Courses for Freshmen and Sophomores

Eng. 211, 212, 213	15
Speech, Eng. 224	3
Math. 311, 312, 315	15
Music or Art Appreciation	6
Military Science	12
Physical Education for Women	6
Chem. 111, 112 or Physics	10
Biological Sc.	10
C. Ed. 317, 318, 319	6
History 213, 221 or 222	10
Economics, Ec. 231, 232, 233	15
Business Correspondence, B. A. 339	5

### Business Administration

The following is suggested for those desiring to complete a major in the field of business administration.

This major is recommended for those planning to enter one of the practical fields of trade or industry as administrators or office workers.

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Business Management, B. A. 351	5 (5-0)	-----	-----
Principles of Retailing, B. A. 346	-----	-----	5 (5-0)
Bookkeeping and Accounting, B. A. 332, 333, 334	5 (5-0)	5 (5-0)	5 (5-0)
Electives	2 Hrs.	8 Hrs.	3 Hrs.
Cost Accounting, B. A. 341	-----	-----	5 (5-0)
Statistics, Math. 318	-----	5 (5-0)	-----
Sociology, Soc. 231	5 (5-0)	-----	-----
	18	18	18

#### Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Office Management, B. A. 352	-----	5 (5-0)	-----
Personnel Administration, B. A. 353	-----	-----	5 (5-0)
Commercial Law, B. A. 335	5 (5-0)	-----	-----
Principles of Real Estate, B. A. 357	5 (5-0)	-----	-----
Insurance, B. A. 356	-----	5 (5-0)	-----
Principles of Salesmanship, B. A. 337	-----	-----	5 (5-0)



Labor Problems, Ec. 234-----	-----	-----	5 (5-0)
Electives -----	3 Hrs.	8 Hrs.	3 Hrs.
Auditing, B. A. 343 -----	5 (5-0)	-----	-----
	18	18	18

### Suggested Electives

C. Ed. 314, 315, 316.

Eng. 244, 231.

B. A. 324.

Ec. 254.

C. Ed. 321, 322, 333.

### Commercial Education

The following is suggested for those desiring to complete a major in the field of commercial education.

This major is recommended for those planning to enter one of the practical fields of teaching in high schools.

### Major in Commercial Education

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Business Management, B. A. 351-----	5 (5-0)	-----	-----
Principles of Retailing, B. A. 346-----	-----	-----	5 (5-0)
Bookkeeping and Accounting, B. A. 322, 333 -----	5 (5-0)	5 (5-0)	-----
Shorthand, C. Ed. 314, 315, 316-----	5 (5-0)	5 (5-0)	5 (5-0)
Mathematical Statistics, Math. 318-----	-----	-----	5 (5-0)
Adolescent Psychology, Ed. 223-----	3 (2-2)	-----	-----
Educational Psychology, Ed. 231-----	-----	3 (3-0)	-----
Introduction to Guidance, Ed. 233-----	-----	3 (2-2)	-----
Principles of Secondary Education, Ed. 237--	-----	3 (3-0)	-----
Introduction to Education, Ed. 222-----	-----	-----	3 (3-0)

#### Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Office Management, B. A. 352-----	-----	5 (5-0)	-----
Personnel Administration, B. A. 353-----	-----	-----	5 (5-0)
Commercial Law, B. A. 335-----	5 (5-0)	-----	-----
Secretarial Studies, C. Ed. 323-----	-----	6 (2-8)	-----
Advanced Stenography, C. Ed. 322-----	5 (5-0)	-----	-----
Office Training, C. Ed 321a, 321b-----	2 (2-0)	-----	6 (0-13)
Office Appliances, C. Ed. 324-----	-----	2 (0-4)	-----
Educational Philosophy, Ed. 224-----	-----	3 (3-0)	-----
Methods of Teaching Com. Ed., Ed. 250-----	-----	5 (5-0)	-----
Observation and Practice Teaching, Ed. 251 -----	-----	-----	5 (5-0)
Physical Education, Phy. Ed. 324-----	5 (5-0)	-----	-----

**CERTIFICATE IN COMMERCIAL EDUCATION**

Students interested in the commercial field either as secretaries or teachers are urged to complete the four-year course and graduate with a degree. In cases where this cannot be done they may complete a two-year course in this field by qualifying for the duties of the stenographer-typist.

**SUGGESTED PROGRAM FOR SECRETARIES  
AND STENOGRAPHERS****Two-Year Course**

Eng. 211, 212, 213	15 Hrs.
Math. 311, 312, 315	15 Hrs.
C. Ed. 314, 315, 316	15 Hrs.
C. Ed. 317, 318, 319	6 Hrs.
C. Ed. 321, 322, 323	19 Hrs.
B. A. 339	5 Hrs.
Phys. Ed.	6 Hrs.
B. A. 352	5 Hrs.
Electives	15 Hrs.

This course is carefully planned for the purpose of training prospective candidates for various stenographic, typing, and clerical positions. Under immediate supervision students are trained to do simple routine work requiring care and accuracy in details. Special attention will be given to instruction in preparation for Civil Service examinations.

**COURSES IN BUSINESS ADMINISTRATION AND  
COMMERCIAL EDUCATION**

**332. Bookkeeping and Accounting.** This course is specially designed to serve as an introduction to the fundamental principles of bookkeeping and accounting. A thorough study is made of the theory of accounts, principles of debit and credit, special journals and ledger operations, adjustments, financial statements and the handling of different classes of commercial paper. Credit 5(5-0).

**333. Accounting.** This course presents the underlying principles of accounting as it is practiced in the business world. It deals chiefly with corporation accounting and accounting systems. This is followed by a discussion of the principles underlying accounting valuation and interpretation. The uses to which accounting data are to be put are emphasized at every step. Prerequisite: B. A. 332. Credit 5(5-0).

**334. Accounting.** This is a course covering the advanced principles of Accounting and deals chiefly with installment accounting, partnership, Tax accounting and retail methods of inventory and is a continuation of B. A. 332 and 333. Spring Quarter. Credit 5(5-0).

**335. Commercial Law.** Sales of personal property, bailment, common carriers, agency, master and servant, partnership, contracts, corporation, insurance, landlord and tenant, etc. Credit 5(5-0).

- 337. Principles of Salesmanship.** This course is based upon actual experience of men successful in the field of salesmanship. It develops the subject from sound economics, philosophical, and psychological points of view. Economics of salesmanship is presented so that the student may see where the work performed is justifiable and necessary in the economic regime. The course includes psychology so that the student may more readily adjust himself to actual sales conditions and learn why some men and ideas succeed while others fail. Credit 5(5-0).
- 339. Business Correspondence.** This course makes a thorough and practical analysis of all forms of business letters and gives constructive information on how to write letters that convince, whether they be sales letters, follow-up letters, form letters, complaint, collection and application letters. This course is required of all students in Business Administration and Secretarial Science. Prerequisites: Eng. 211, 212. Credit 5(5-0).
- 341. Cost Accounting.** This course is a study of the elements and principles of cost accounting. Emphasis is placed on accounts as a means of administrative control and economy of production. The theory of cost accounting and its relation to general accounting, to cost in general, to stock records, and to methods of establishing the basis of cost are among the fundamentals considered in this course. Prerequisites: 332, 333, or 351. Credit 5(5-0).
- 343. Auditing.** This course covers the duties and responsibilities of the auditor, principles and procedures in making audits; arrangement of working papers and the preparation of reports. Prerequisite: B. A. 332, 333, 341. Credit 5(5-0).
- 346. Principles of Retailing.** This course aims to cover the high points in the retail process of marketing as it is applied especially to the small independent store. Modern grocery and other smaller stores will be used as examples. Detailed studies will be made of store management, finance and control, and marketing. Credit 5(5-0).
- 351. Business Management.** Business Management covers the fundamentals of industrial organization and operation and helps the student to gain that basic knowledge of business which should be part of the equipment of every businessman. Credit 5(5-0).
- 352. Office Management.** This course covers the principles and methods employed in departmental and centralized offices. Special attention is given to office layout, office system, equipment, selecting workers and general office services. Credit 5(5-0).
- 353. Personnel Administration.** This is a comprehensive course dealing with the principles and practices in the administration of employees of commercial and industrial establishments. This course is very practical, giving the student a view of personnel as the businessman sees it. Credit 5(5-0).

**356. Insurance.** This course is a survey in a general way of the whole field of insurance. It deals with the nature and statistical basis of different kinds of insurance as property insurance, straight life, endowment, accident, industrial, old age, fire, livestock, etc. The function of publicity and the need for educating the public in the principles and services of insurance receive much attention. Credit 5(5-0).

**357. Principles of Real Estate.** This course deals with real estate as a profession, classes of property—suburban, apartment, industrial, farm and resort—rentals, leasing, the work of the broker, property management and financing. Credit 5(5-0).

### COURSES IN COMMERCIAL EDUCATION

**314. Shorthand.** This course includes a study of wordbuilding and the general principles outlined in the Gregg Shorthand manual and speed studies. [The first five lessons are thoroughly mastered during this quarter.] Credit 5(5-0).

**315. Shorthand.** This course is a continuation of 314 and with added emphasis on transcription of simple letters and documents. Prerequisite: 314. Credit 5(5-0).

**316. Shorthand.** The principles are included early in this course and emphasis is placed on difficult dictation, speed test and reporting speeches. Prerequisite: 315. Credit 5(5-0).

**317. Typewriting.** The typewriting course covers a working knowledge of the use of all parts of the typewriter, a thorough command of the keyboard by means of the touch system, rhythmic drills, practice in writing words, etc. Credit 2(0-5).

**318. Typewriting.** This course is concerned with tests and drills for speed and accuracy in the transcription of easy material from printed matter. Prerequisite: 317. Credit 2(0-5).

**319. Typewriting.** Technical typewriting is emphasized in this course by allowing the student to spend most of his time on tabulation, stencil cutting, report making and other practical duties. Prerequisite: 318. Credit 2(0-5).

**321a, 321b. Office Training.** Students will be required to do practice work in the offices and plants of the College and in and around Greensboro for a period of 13 hours for one quarter. A study is also made of the executive work connected with offices of many types. Two hours each week are devoted to discussion of the various problems found in these offices. Prerequisite: C. Ed. 323. Credit 8(2-13). Credit, lecture alone, 2(2-0). Laboratory alone, 6(0-13).

**322. Advanced Stenography.** Advanced stenography is a view of principles and practices of shorthand and typewriting for the purpose of developing speed. Emphasis is put on the details of report making, taking dictation from speakers and other specialized fields of shorthand and typewriting. Open to all persons who have had Gregg shorthand. Prerequisite: C. Ed. 316, 317. Credit 5(5-0).

**323. Secretarial Studies.** This course deals with the qualification, duties, responsibilities and work of a secretary. The other points considered are: Managing callers, handling correspondence, locating sources of information, making appointments, and other routine and special duties in systematizing the office. Prerequisite: C. Ed. 316, 319. Eng. 213. Credit 6 (2-8).

**324. Office Appliances.** The purpose of the course is to give the student a general working knowledge of the leading office machinery and equipment. Students will be instructed in the use of adding, calculating, duplicating, name and data writing, billing, miscellaneous labor-saving and bookkeeping machines. This course can be given any quarter at the discretion of the instructor. Prerequisite: C. Ed. 317. Credit 2 (0-4).

## DEPARTMENT OF CHEMISTRY

Prospective majors in chemistry should consult the instructors in the department early in their college career so that their major work may be properly planned.

At least ten quarter hours of General Chemistry are required for graduation in Education and Sciences of all who do not take ten hours in general physics.

The following is suggested as a major for those interested in graduate study, research, industry, government service or teaching.

NOTE: Courses for freshmen and sophomores may be found on page 59.)

### Major in Chemistry

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Organic Chemistry, Chem. 121, 122, 123_____	5 (3-4)	5 (3-4)	5 (3-4)
Qualitative Analysis, Chem. 131_____	5 (2-6)	-----	-----
Minor or Electives _____	5 ( )	10 ( )	10 ( )

#### Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physical Chemistry, Chem. 141, 142_____	5 (5-0)	5 (5-0)	-----
Quantitative Analysis, Chem. 132, 133_____	5 (2-6)	5 (2-6)	-----
Minor or Electives _____	5 ( )	5 ( )	15 ( )

## COURSES IN CHEMISTRY

### For Undergraduates

**111. General Chemistry.** This is the first quarter of a course covering the fundamental principles of Chemistry in which are considered the general properties of matter, chemical and physical changes, the fundamental laws governing these changes, and a study of the important gaseous elements and simple compounds from the point of view of the atomic and molecular theory. Credit 5 (3-4).



- 112. General Chemistry.** A continuation of Chem. 111. It covers the properties, reactions, and uses of the more important non-metallic elements, atomic structure, and a study of electrolytes. Credit 5(3-4).
- 113. General Chemistry.** This is the third quarter of the complete course in General Chemistry. It consists of a detailed study of the metals, including their metallurgy, properties, reactions, and uses. The laboratory work emphasizes the behavior of the metallic ions in solutions and their arrangement in the qualitative groups. Ionic equilibria and oxidation and reduction are considered in detail. Credit 5(3-4).
- 121. Organic Chemistry.** A course dealing with the chemistry of the carbon compounds. Special emphasis is laid upon the relationship existing between the various groups, and upon methods of organic synthesis. Prerequisites: 111, 112, 113. Fall. Credit 5(3-4).
- 122. Organic Chemistry.** A continuation of Chemistry 121, covering such compounds as the ring structure or aromatic compounds. Lectures and laboratory. Prerequisite: Chem. 121. Winter. Credit 5(3-4).
- 123. Advanced Organic Chemistry.** Lectures and laboratory on the applications and limitations of organic reactions, with special reference to synthesis. Prerequisites: Chem. 121, 122. Fall and Spring. Credit 5(3-4).
- 125. Chemical Literature Study.** A course to familiarize students with the more prominent chemical periodicals. It introduces techniques used to search the literature in regards to a particular subject or compound and how to use the subject, author or formula index of abstract, dictionary and research report journals. Prerequisites: Chem. 121, 122. Fall and Spring. Credit 2(1-2).
- 131. Qualitative Analysis.** This course is an intensive course dealing with the fundamental principles of analysis. It develops the power for the student to form decisions based upon experimental results. Preliminary experiments are introduced to illustrate chemical principles and to give practice in equation writing. The students are required to analyze unknown products, slags, and drosses. Prerequisites: Chem, 111, 112, and 113. Fall and Spring. Credit 5(2-6).
- 132. Quantitative Analysis.** A course dealing with volumetric methods of analysis. Special emphasis is laid upon the physico-chemical principles upon which the success of the determination depends. Prerequisite: Chem. 131. Fall and Winter. Credit 5(2-6).
- 133. Quantitative Analysis.** A continuation of Chemistry 132, dealing with gravimetric methods of analysis. Lectures and laboratory. Prerequisite: Chem. 131. Winter. Credit 5(2-6).
- 141. Physical Chemistry.** The course in Physical Chemistry emphasizes the physical and theoretical aspects of Chemistry. This course deals with the atomic and molecular concepts of matter, and the properties of gases, liquids, and solids. Prerequisites: Physics 323, Mathematics 321-322. Fall. Credit 6(3-6).



- 142. Physical Chemistry.** A continuation of Chemistry 141, dealing with the first and second law of thermodynamics, thermochemistry, free energy and entropy, chemical equilibrium and phase equilibria. Prerequisite: Chemistry 141. Credit 6(3-6).
- 143. Physical Chemistry.** A continuation of Chemistry 142, dealing with the Kinetics of chemical reactions, electromotive force, conductance of electrolytes, and Surface Chemistry and Colloids. Prerequisite: Chemistry 142. Spring. Credit 6(3-6).
- 144. Physiological Chemistry.** This course is designed to acquaint the students of nutrition, agriculture, and pre-professional students with the general composition of foods and their utilization by living organisms. Prerequisite: Organic Chemistry 122. Spring. Credit 4(2-4).
- 145. Introduction to Chemical Research.** This course is designed for the training of undergraduate and graduate students who desire to avail themselves of the library and laboratory facilities of the department. Required of all undergraduate students majoring in chemistry. Prerequisite: Advanced standing in the department of Chemistry. Any quarter. Credit 5(1-4).
- 146. Chemical Engineering.** A study of the thermal properties of matter and the energy relationships underlying mechanical and chemical processes, including a thorough discussion of the first law of thermodynamics as applied to both batch and flow processes, and such operations as combustion, thermal control of chemical reactions, and the like. Prerequisites: Chem. 141, Mathematics 321. Credit 4(4-0).

#### Graduate Course

- 601. Problems in Organic Chemistry.** The important principles of organic chemistry are emphasized from a more mature point of view. Credit 5(3-4).

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### DEPARTMENT OF EDUCATION

#### Professional Requirements for Undergraduates

The professional education courses are designed to provide understandings, knowledges, skills, and experiences which relate to the art and science of teaching. The professional courses in education are organized around three areas: The Pupil; The School; and Methods, Observation, and Practice Teaching. The student who desires to meet the requirements for teacher certification in the high schools of North Carolina should complete a minimum of nine quarter hours in each of these areas. The student is required to complete the minimum requirements in the areas "The Pupil" and "The School" before he is eligible for credit in Methods, Observation and Practice Teaching, unless special permission is granted by the dean of the school in which the student is enrolled.

NOTE: State teachers' certificates are not issued by the College, but by the State Department of Public Instruction. Persons interested in securing a certificate to teach in the Public Schools of this State should contact the Division of Certification, State Department of Public Instruc-

tion, Raleigh, North Carolina, immediately after graduation. Certificates are issued only to persons who have graduated from a standard class "A" college and who have had the necessary professional courses.

The following are courses in each of the three major areas:

### The Pupil

Adolescent Psychology, Ed. 223	3 (2-2)
Educational Psychology, Ed. 231	3 (3-0)
Introduction to Guidance, Ed. 233	3 (2-2)
or	
Evaluation and Measurements, Ed. 236	3 (2-2)
Elective: Field-Laboratory Experiences in Education, Ed. 234	2 (1½-3)

### The School

Introduction to the Study of Education, Ed. 222	3 (3-0)
Philosophy of Education, Ed. 224	3 (3-0)
Principles of Secondary Education, Ed. 237	3 (3-0)
or	
Problems of Secondary Education, Ed. 238	3 (3-0)

### Methods, Observation and Practice Teaching

Materials and Methods of Teaching, Ed. 243, 245, 246, 247, 248, 249, or 250	5 (5-0)
(The particular methods course to be pursued by the student will be determined by his or her major or minor subject.)	
Observation and Practice Teaching	5 (2-6)

Those desiring to pursue professional courses in teaching will be required to undergo counseling for the purpose of determining their capacity for profiting from the professional curriculum. After successful completion of one or two courses in professional education, students desiring teacher certification will be required to file a formal application in writing to the dean of their respective school. It is not recommended that students apply for the teacher education curriculum if the average in the field in which they plan to teach is less than "B".

## COURSES IN EDUCATION

### For Undergraduates

**211. Orientation.** This course consists of lectures and discussions designed to provide the student with functional insight into methods of improving study, taking notes, and using the library. It introduces the student to various broad groups of vocations. Effective matching of individual qualifications with significant occupational requirements will be considered. Any quarter. Credit 1(1-0).

**221. General Psychology.** An introduction to psychological terms, principles and facts. What psychology is and does. A study of reactions and tendencies to reaction; native and acquired traits, instincts, emotions, feelings, sensations. This course will not be counted to meet the specific requirements in education for a high school teacher's certificate. Fall. Credit 5(5-0).

**222. An Introduction to the Study of Education.** This course is designed to give the student an overview of and an introduction to the nature of education and its place in the social order, the organization and administration of schools, the place of teacher in the school and teaching as a profession, an understanding of the historical development of the American public school, and practical considerations for teachers. Credit 3(3-0).

**223. Adolescent Psychology.** After a brief but comprehensive survey of pre-adolescent growth, development, and maturation in terms of physical structures and functions, origins, and developmental continuity in intellectual, social, and emotional behavior, this course will extend consideration of the same major behavioral categories into the adolescent years, from about 10 to 22 years of age. Laboratory experiences will be provided to afford the student opportunities to gain a mastery of, and insight into, adolescent behavior, based upon the best available classical and current experimental evidence. Experiences in recognizing and dealing with categorical individual differences between and among adolescents. Situations, of a laboratory nature, in which the student might observe and record, classify and interpret the behavior of adolescents in learning states, will be selected from the available facilities on the campus and in the community. Laboratory fee, \$2.00. Credit 3(2-2).

**224. Educational Philosophy.** This course aims to provide an understanding of the purposes and philosophy of education, fundamental concepts and ultimate objectives of education, current educational doctrines and controversies, changes in education procedures, historical background and philosophical implications, and different philosophical viewpoints as they relate to administration, evaluation, curriculum, guidance, and materials and methods of teaching. Credit 3(3-0).

**231. Educational Psychology.** This course is designed to help the student achieve a professional understanding of the learning process, including the nature of, and forces motivating, learning behavior. Activities will be directed towards helping the student achieve a mastery of fundamental theoretical concepts, based upon the best available classical and current experimental evidence essential to insight into the individual's behavior in a variety of learning situations. Prerequisite: Ed. 223. Credit 3(3-0).

**233. Introduction to Guidance.** This course is designed to introduce the student to various systems of individual and group guidance, with special reference to the secondary school. The student will be required to develop and to defend his philosophy of guidance, by means of the best available evidence gleaned from experimentation and controlled observation at either on or off-campus agencies. Special attention will be paid to the development of theory and practice for handling special cases of learning deficiencies in reading, speech, writing, and mathematics. In the laboratory, the student will be introduced to practical guidance materials and to a variety of situations designed to bring into bold relief some of the fundamental promises of guidance. Laboratory fee, \$2.00. Credit 3(2-2).

- 234. Field-Laboratory Experiences.** This course is designed to place the student in position to summon, organize, and supply to the task of helping individuals learn, all the resources of the school and community. The student will apply his mastery of the fundamental theoretical concepts essential to opening insight into behavior, to real situations in the field, provided by various community agencies. Opportunities will be given to become acquainted with the nature and use of the several audio-visual aids. The student will be expected to show progressive growth and maturation for handling children of different ages in, and from, different settings. Laboratory fee, \$2.00. Credit 2 (½-3).
- 236. Measurement and Evaluation.** In this course, special attention will be paid to a variety of standardized and teacher-made measuring devices, to acceptable methods of selecting, administering, and interpreting all types of tests applicable to the school and classroom. Extensive practice in the administration and interpretation of selected tests, will be provided in a laboratory setting. Many types of tests will be demonstrated. Practice will be afforded the student in organizing and utilizing teacher-made tests. Finally, extensive, laboratory experience will be designed to create an appreciation for and mastery of certain statistical techniques for studying both the pupil's and teacher's achievement. Prerequisite: Ed. 231. Laboratory fee, \$2.00. Credit 3 (2-2).
- 237. Principles of Secondary Education.** Major considerations include the scope and functions of the high school and its relation to the elementary school and college; the high school pupil; high school curriculum; high school teacher, guidance, teaching loads, professional ethics, extracurricular activities, the nature of method and subject matter, and the characteristics of the successful teacher. Prerequisites: Ed. 231, Ed. 222, or Ed. 224. Credit 3 (3-0).
- 238. Problems of Secondary Education.** This course deals with problems which arise in secondary school administration and teaching. Problems of the secondary school relating to school discipline, classroom management, physical aspects of the classroom, economy features of teaching procedure, radio and mass media of communication in school activities, health and safety education, sex education and the use of the library will be considered. Prerequisite: Credit 3 (3-0).
- 243. The Teaching of English.** This course is a study of the special problems which confront the teacher of English in the high school. Open only to seniors. Required of those planning to teach English. Prerequisites: Thirty hours of English, Education 231 and 237 or 238. Fall and Winter. Credit 5 (5-0).
- 245. The Teaching of Social Sciences.** A course dealing with a study of the methods of teaching history in high schools. Special attention will be given to such problems as the organization of material, classroom equipment, etc. Open to seniors. Required of those planning to teach the subject. Prerequisites: Thirty hours of Social Studies; Ed. 231 and 237 or 238. Fall and Winter. Credit 5 (5-0).



- 246. The Teaching of Mathematics.** A course which deals with the evaluation of subject matter, modes, methods, and objectives in the teaching of mathematics in the junior and senior high school. Required of those planning to teach the subject. Prerequisite: 20 hours of Mathematics; Ed. 231, 237 or 238. Fall and Winter. Credit 5 (5-0).
- 247. The Teaching of Modern Languages.** This course is devoted to a study of the problems and difficulties experienced in teaching Foreign Languages. Special attention is given to the matter of classroom aids, equipment, etc. Required of those students planning to teach Languages. Prerequisite: 30 hours of French; Ed. 231 and 237 or 238. Fall and Winter. Credit 5 (5-0).
- 248. The Teaching of Art.** A study of the aims and objectives, methods and techniques of art teaching in the modern school. Special attention is given to planning courses of study, presentation, selection of equipment, reference and illustrative material and correlation—considerable emphasis is placed on blackboard drawings. Required of those wishing to qualify as art teachers. Prerequisite: 45 hours of Art; Ed. 231, 237 and 238. Fall and Winter. Credit 5 (5-0).
- 249. The Teaching of Science.** A study of the present methods of teaching such subjects as biology, physics, chemistry, and general science in the high school. Special attention is given to laboratory equipment used in the teaching of these subjects. Required of all those planning to teach in this field. Prerequisites: 3 hours of science; Ed. 231 and 237 or 238. Fall and Winter. Credit 5 (5-0).
- 250. The Teaching of Commercial Subjects.** Organization, preparation and care of materials, followed by an analysis of the methods of procedure, standards and objectives of the teacher of commercial subjects in high school. Students may be admitted to this course only upon the recommendation of the head of the Department of Commercial Education. Fall and Winter. Credit 5 (5-0).
- 251. Observation and Practice Teaching.** All students planning to teach are required to spend at least sixty hours in practice teaching in the type of school in which they plan to work. Students should schedule this course only after consultation with the Director of Practice Teaching. In no instance will a student be permitted to carry more than thirteen hours (including Education 251) during the quarter this course is scheduled. Fall, Winter, Spring. Credit 5 (1-8).
- 152B. Methods of Teaching Home Economics.** This course deals with the aims of education, and the place of home economics in general education, development of a philosophy, methods of teaching, means of evaluating learnings. Consideration will be given to aid in personality development of the teacher, and other problems of the home economics teacher. Opportunity will be provided for observation in various schools. Prerequisites: Education 231 and 237. Credit 2½ (3-0).

**152A. Methods of Teaching Home Economics.** The course considers the organization of general home economics from elementary through high school. Emphasis is placed on the State Vocational Home Economics program, its organization, administration, policies and methods. Prerequisite: Education 152A. Credit  $2\frac{1}{2}$  (3-0).

**153. Observation and Directed Practice Teaching.** The course is planned to guide students in selecting, evaluating, and using materials and methods in actual teaching situations. Problems growing out of student teaching experiences will be analyzed and used as basis for individual and group conference. Participation in home projects, adult and Home Economics Club program will be encouraged. Thirty hours of observation, 60 hours teaching required. Prerequisites: Education 152A-152B. Credit hours 5.

See also: (1) Agricultural Education, p. 81.

(2) Vocational Agriculture, p. 81.

(3) Industrial Education, p. 120.

(4) Vocational Education, p. 126.

## DEPARTMENT OF ELECTRICAL ENGINEERING

The curriculum of the Department of Electrical Engineering provides comprehensive training in the fundamental sciences—mathematics, physics, chemistry—with sufficient work in the humanities to develop well-rounded engineers.

The required courses in Electrical Engineering which are offered by the Department may be mentioned briefly. Electrical power engineering has to do with the theoretical and practical phases of power generation, distribution and utilization. Electrical communication deals with transmission of signals, speech, music, and pictures by open wire lines, cables and radio. Electronics treats the statistical behavior of electrons and ions in various types of electrical equipment.

Throughout the course the teaching of theory and its modifications by practice, the development of an analytical judgment, and the acquiring of a fundamental scientific background are emphasized. The acquisition of specific factual knowledge is left, except when necessary to sound pedagogy, to the training in actual experience through which every electrical graduate must go during his first years out of school.



## CURRICULUM

## Freshman Year

See first year's curricula of Mechanic Arts, page 55.

## Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Math. 321, 322, 323-----	5 (5-0)	5 (5-0)	5 (5-0)
Physics 321, 322, 331-----	5 (3-4)	5 (3-4)	5 (4-2)
E. E. 324, 325, 326-----	5 (3-4)	5 (3-4)	5 (3-4)
Military Science 221, 222, 223-----	2 (2-2)	2 (2-2)	2 (2-2)
M. E. 323-----	3 (0-6)	-----	-----
Machine Shop 328-----	-----	2 (0-4)	-----
→ M. E. 327 (327)-----	-----	-----	3 (3-0)

## Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
E. E. 331, 332, 333-----	3 (3-0)	3 (3-0)	3 (3-0) 5 (3-4)
E. E. 334, 335, 336-----	2 (3-4)	2 (3-4)	1 (3-4) 3 (3-0)
M. E. 331, 332, 333-----	5 (5-0)	5 (5-0)	5 (5-0)
Math. 331-----	5 (5-0)	-----	-----
Phy. 332-----	5 (5-0)	-----	-----
M. E. 336-----	-----	5 (5-0)	-----
M. E. 321-----	-----	-----	4 (3-2)
→ M. E. 327 (337)-----	-----	-----	3 (3-0)
Elective-----	-----	3 ( )	-----

## Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
E. E. 346, 347, 348-----	5 (3-4)	5 (3-4)	5 (3-4)
E. E. 355, 356, 357-----	5 (3-4)	5 (3-4)	5 (3-4)
E. E. 360-----	5 (5-0)	-----	-----
→ *Economics-----	5 (5-0)	5 (5-0)	-----
Electives-----	-----	3 ( )	5 ( )

## COURSES IN ELECTRICAL ENGINEERING

## Suggested Electives

Math. 324	Math. 501, 506
English 244	Pry. 333, 337, 352
Machine Shop 329	E. E. 351, 354
M. E. 341, 317, 339	

**321, 322, 323. Basic Electrical Engineering I, II, III.** A comprehensive coverage of electrical engineering fundamentals and applications for non-electrical engineering fundamentals and applications for non-electrical engineering students. Prerequisites: Phy. 323, Math. 323. Credit 5 (3-4).

\* Economics requirement is satisfied by taking ~~any two of the courses~~ Ec. 231, 232, or 234.  
NOTE: Students who do not have credit for Solid Geometry are required to take it during the freshman year without credit.

- 324, 325, 326. Introduction to Electrical Engineering I, II, III.** Fundamental electrical concepts and units, network calculations, ferro-magnetic materials, etc. Corequisites: Phy. 321, 322, 323, Math. 321, 322, 323. Credit 5(3-4).
- 331. Electric Circuit Analysis I.** Formerly Direct Current Machinery E. E. 331. Electric circuit theory, parameters, and calculations; magnetic circuit and dielectric circuit theory and calculations. Prerequisites: Math. 323, Physics 323, E. E. 323. Corequisite. Credit 3(3-0).
- 332. Electric Circuit Analysis II.** Formerly Direct Current Machinery E. E. 332. Vector Algebra as applied to A. C. circuit analysis, periodic functions; A-C circuit parameters, theory and calculations. Prerequisite: E. E. 331, E. E. 334. Credit 3(3-0).
- 333. Electric Circuit Analysis III.** Formerly Alternating Current Circuits E. E. 333. A continuation of E. E. 332. Polyphase alternating current theory and calculations. Prerequisite: E. E. 332, E. E. 335. Credit 3(3-0).
- 334. Electrical Measurements I.** Theory and operation of wheatstone bridges, ballistic galvanometers, potentiometers, various methods of measuring direct current network parameters. Credit 3(1-4). Prerequisites: E. E. 332, or Physics 331, Math. 323, Physics 323. Corequisite for E. E. students, E. E. 331.
- 335. Electrical Measurements II.** A. C. bridges, measurement of power, A. C. circuit parameters, magnetic measurements. Credit 4(2-4). Prerequisite: E. E. 334. Corequisite: E. E. 332.
- 336. Electrical Measurements III.** Characteristics of circuits under transients, characteristics of non-linear impedances, measurement of linear circuit parameters at high frequencies. Credit 4(2-4). Prerequisite: E. E. 335. Corequisite: E. E. 333.
- 346. Applied Electronics.** Electron ballistics, electron emission, vacuum tubes, gas filled tubes, specialized tubes, applications to communication, industrial control, physical measurements. Credit 5(3-4). Prerequisites: Math. 331, E. E. 333, E. E. 336, or special consent of instructor. This course was formerly Communication Engineering.
- 347. Radio Engineering I.** Network theorems, impedance transformation, distributed constants, coupled circuits, amplifiers and oscillators. Credit 5(3-4). Prerequisites: E. E. 346, Math. 331. This course formerly Communication Engineering.
- 348. Radio Engineering II.** Modulation, detection, receiving and transmitting systems. Credit 5(3-4). Prerequisite: E. E. 347. This course formerly Communication Engineering.
- 351. Power Transmission Lines.** Application of transmission line parameters. Credit 5(5-0). Prerequisites: E. E. 347, Math. 331.
- 354. Radio Circuits.** Special topics and laboratory work of special interest to the student. Most of the work is given by the project method. Credit 5(1-8). Prerequisite: E. E. 346.

- 355. Direct Current Machinery.** Formerly Alternating Current Apparatus. Principles, characteristics and operation of direct current machinery; laboratory work co-ordinated with classroom study. Required of Seniors in Electrical Engineering. Prerequisite: E. E. 331, 332, 333. Credit 5(3-4).
- 356. Alternating Current Apparatus I.** Formerly Alternating Current Apparatus E. E. 355. Principles, characteristics and operation of alternating current apparatus along with co-ordinated laboratory work. Prerequisite: E. E. 355. Credit 5(3-4).
- 357. Alternating Current Apparatus II.** Formerly Alternating Current Apparatus E. E. 356. A continuation of E. E. 356. Laboratory work co-ordinated with classroom study. Prerequisite: 356. Credit 5(3-4).
- 358. Radio Servicing.** This is a continuation of 357. Laboratory experiments and work in commercial installation are stressed. Prerequisite: E. E. 357. Credit 5(3-4).
- 630. Same as Physics 507.**
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## DEPARTMENT OF ENGLISH LANGUAGE AND LITERATURE

### Aims of the Department of English

The objectives of the Department of English are as follows:

1. To develop in students the skills and techniques of effective writing, reading, and speaking.
2. To lead students to the realization that a mastery of the tools of communication contributes to achievement in all fields of major concentration and to success in all phases of living.
3. To equip students with adequate subject-matter background for the effective teaching of English and with the skills essential to the attainment of related vocational objectives.
4. To cultivate in students an appreciation for literature; to develop ability to interpret it readily; to stimulate a taste and desire for wide reading of the best forms of literature.
5. To prepare and train students for graduate study in English.

### General Requirements

All freshmen are required to take a placement test in English. Those failing this test must register for the course Remedial English (Eng. 210).

A minimum of twenty quarter hours of English is required for graduation from all departments. All students of all departments must take Eng. 211, Eng. 212, and Eng. 213. Five hours of literature are required.

### English Majors and Minors

English majors and minors are required to have an average of B in their three Freshman English courses and to pass a comprehensive examination in the field of English at the end of the Fall Quarter of their senior year. Those failing this examination will be required to register for English 245.

A major in English is designed for persons interested in teaching English in the secondary school or in pursuing graduate work in the field. It is also recommended for those intending to follow law, the ministry, writing, or research as a profession.

An English minor satisfies the State's certification requirements for English as a second teaching field on the secondary level.

Requirements for the major (in addition to the three Freshman English courses):

English 220  
English 221  
English 222  
English 223  
English 224  
English 234  
English 237 or 244

Electives from any advanced English courses sufficient to complete the required 50 hours.

Requirements for the minor (in addition to the three Freshman English courses):

English 220  
English 221  
English 223  
English 224  
English 234

English majors are advised to take English 232 to meet requirements for certification in English in the State of North Carolina.

Courses (in addition to basic requirements) which might be taken by those majors who are interested primarily in language and literature:

Negro Literature (215)—3  
Journalism (231)—3  
Development of Modern English (237)—3  
Eighteenth Century Literature (241)—3  
The Romantic Era (242)—3  
The Victorian Era (243)—3  
The Novel in English (246)—3  
Special Reading (217)—3

Courses in addition to basic requirements which might be taken by those majors who are interested primarily in speech and dramatics:

Public Speaking (225)—3  
Dramatic Literature (226)—3  
Oral Interpretation (227)—3  
Acting (228)—3

## COURSES IN ENGLISH

## Language and Composition

- 210. Remedial English.** Emphasis upon the elementary requirements in English usage; such as, the rudiments of grammar, sentence punctuation, reading and spelling. Students who fail to pass the placement test in English are required to complete his course in addition to the regular English requirements. Credit 3(3-0).
- 211. Grammar.** A review of the fundamental principles of grammar and the application of these principles in sentences and paragraphs. Correct spelling is given considerable attention in this course. Any quarter. Credit 5(5-0).
- 212. Composition.** Practice in paragraph development, outlining letter writing, short themes and using the library. This very practical course introduces the student to the kinds of writing he is likely to do anyway. Prerequisite: English 211. Credit 5(5-0).
- 213. Composition and Reading.** This course deals with reading and discussing various types of exposition and introduces the student to the techniques of research writing. Prerequisite: English 212. Credit 5(5-0).
- 217. Special Reading.** This is a special reading course offered to those students who have reading disabilities. Persons registered will have the opportunity to increase their rate of reading and their ability to comprehend thought from the printed page through vocabulary study and a broad reading program. Credit 3(3-0).
- 231. Journalism.** Theoretical and practical work in recognizing, gathering, and writing news. While primary attention is given to the development of journalistic technique, there is considerable drill on the fundamental principles of composition. Prerequisite: English 213. Credit 3(3-0).
- 232. Young People's Literature.** This course is designed to acquaint prospective teachers with the field of young people's literature—fiction, non-fiction and contemporary events. Attention will also be paid to methods of teaching reading in the secondary schools. Credit 3(3-0).
- 236. Argumentation and Debating.** A study of the principles of argumentation. The course consists of discussions, lectures, and classroom debates, all of which procedures are preliminary to public debates. Prerequisite: Eng. 213. Credit 3(2-2).
- 237. Development of Modern English.** A study of the origin and development of the English language with emphasis on the present status of modern American English. Spring. Credit 3(3-0).



- 244. Advanced Composition.** This course is intended to strengthen the techniques of writing developed in English 212 and 213. The student will not only strengthen and polish his written expression, but he will have opportunity to practice on the more specialized forms of writing that appeal to him. It is especially recommended for English majors and minors, agricultural and engineering students. Prerequisite: 20 hours of English. Credit 3(3-0).
- 245. Review for English Majors and Minors.** This course is planned particularly for seniors who desire personal attention in further mastering the fundamentals of English composition and in becoming more conversant with the general field of English and American literature. Required of all Senior English Majors and Minors who fail the Comprehensive Examination. Winter. Credit 0(2-0).

### Speech and Expression

- 224. Voice and Speech Improvement.** Drill and exercise to improve speech and voice in the classroom, at social affairs, in club meetings, in vocational pursuits, and in other everyday speech situations. Any quarter. Credit 3(2-2).
- 225. Public Speaking.** A study of the basic attributes and the fundamental processes of speech. Practice in speech organization and delivery. Prerequisite: Eng. 224. Credit 3(2-2).
- 227. Oral Interpretation.** Training in expressive audience reading of selections from classical, modern, and current literature. Credit 3(1-2).
- 228. Acting:** Its theory and practice. A laboratory course designed to develop skill in voice, diction, and pantomime by means of readings, monologues, skits, and short plays for school and community. Practical experience in the major A. and T. dramatic productions. Credit 3(1-4).
- 229. Parliamentary Procedure.** Theory and practice in the rules and customs governing organization and proceedings of deliberative bodies. Prerequisite: English 213. Credit 1(0-2).

### Literature

- 215. Negro Literature.** A survey of all important Negro writers from pre-Civil War days to the present. Readings, reports (oral and written), and one special topic. Credit 3(3-0).
- 220. Introduction to American Literature.** A survey of American literature from colonial times to the present. Prerequisite: Eng. 213. Credit 5(5-0).
- 221. American Literature.** American Literature from 1860 to the present. Prerequisite: English 213. Credit 5(5-0).
- 222. Development of English Literature.** Reading in English Literature from the beginnings to 1700. Study of the growth of ideas and institutions, of the types of literature, and of the great personalities who have contributed most to the literature. Lectures. Reports. Prerequisite: Eng. 213. Credit 3(3-0).



- 223. Development of English Literature.** English Literature from 1700 to the twentieth century. Audio-visual aids shall be used. Lectures. Reports. Prerequisite: Eng. 213. Credit 5(5-0).
- 226. Dramatic Literature.** A survey of dramatic literature. Origin of the drama; readings in the Greek, classical French, Elizabethan, and contemporary drama. Credit 3(3-0).
- 234. Shakespeare.** A detailed, chronological study of twelve principal plays taken from all four of the periods of dramatic production. Lectures, reports, one long paper. Prerequisite: 20 hours of English. Credit 5(5-0).
- 241. Eighteenth Century Literature.** Readings in the poetry and prose of the century. Lectures, collateral assignments, reports and one long paper. Prerequisite: 20 hours of English. Credit 3(3-0).
- 242. The Romantic Era.** The principles and ideas of Romanticism as expressed in the works of the principal English writers of poetry and prose from 1798 to 1823. Term report. Prerequisite: 20 hours of English. Credit 3(3-0).
- 243. The Victorian Era.** Readings in the works of the principal English writers of the Victorian Age. Term report. Prerequisite: 20 hours of English. Credit 3(3-0).
- 246. The Novel in English.** The growth and development of the novel in English from the eighteenth century to the present time. Prerequisite: 20 hours of English. Credit 3(3-0).

## DEPARTMENT OF ART

### GENERAL STATEMENT

The objectives of this course are as follows:

- (a) To discover and develop the latent talent of students for artistic expression and lay a foundation for careers as creative artists.
- (b) To meet a growing demand for specially trained art teachers in our public schools and colleges.
- (c) To develop tastes and discriminations in the choice of materials used in everyday life which will find expression in more beautiful homes and gardens, schools, parks, playgrounds and other public works.
- (d) To provide a culture leading to a more worthy use of leisure time.

All students wishing to major in art must pass a special examination or submit some of their art work for appraisal. Students in other departments desiring special work in art may by arrangement with the instructor take any course listed under art.

**CURRICULUM OF ART****Freshman Year**

See Curriculum First Year Mechanic Arts, Page 55.

NOTE: Students majoring in Art will take Hist. 213 during freshman year.

**Sophomore Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English Elective -----	-----	-----	5 (5-0)
French 214, 215 -----	5 (5-0)	5 (5-0)	-----
Modern European History 211 or 212 -----	5 (5-0)	-----	-----
Freehand Drawing 311, 312, 313 -----	3 (0-6)	3 (0-6)	3 (0-6)
Art Appreciation 314, 315, 316 -----	2 (2-0)	2 (2-0)	2 (2-0)
Military Science 221, 222, 223 -----	2 (2-2)	2 (2-2)	2 (2-2)
Art 317, 318, 319 Color and Design -----	3 (0-6)	3 (0-6)	3 (0-6)
Elective -----	-----	3 Hrs.	3 Hrs.
	20 Hrs.	18 Hrs.	18 Hrs.

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
American History 221 or 222 -----	5 (5-0)	-----	-----
Mediaeval History 232 -----	-----	5 (5-0)	-----
Commercial Art 321, 322, 323 -----	3 (0-6)	3 (0-6)	3 (0-6)
Portrait, Art 334, 335, 336 -----	2 (0-4)	2 (0-4)	2 (0-4)
Art Appreciation 327, 328, 329 -----	2 (2-0)	2 (2-0)	2 (2-0)
Ceramics 337, 338, 339 -----	3 (0-6)	3 (0-6)	3 (0-6)
Composition Art 331, 332, 333 -----	3 (1-4)	3 (1-4)	3 (1-4)
Elective -----	-----	-----	3 Hrs.
	18 Hrs.	18 Hrs.	18 Hrs.

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
History 231 -----	5 (5-0)	-----	-----
Figure Drawing, Art 341, 342 -----	3 (0-6)	3 (0-6)	-----
Oil Painting, Art 347, 348, 349 -----	3 (0-6)	3 (0-6)	3 (0-6)
Phy. Ed. 234 -----	-----	-----	5 (5-0)
Electives -----	6 Hrs.	11 Hrs.	9 Hrs.
	17 Hrs.	17 Hrs.	17 Hrs.

**Suggested Electives**

History of Architecture 324, 325, 326.

Education 222, 231, 248, 251, 223, 237 or 238, 233, 224.

**COURSES IN ART**

**311. Freehand Drawing.** This course is a study of the fundamental principles of drawing. As a useful mode of visual expression selected problems involving basic considerations of line, mass and color are presented for analysis and laboratory practice. Credit 3 (0-6).

- 312. Lettering and Poster Design.** This course is a comprehensive study of the art of lettering with speedball pens, the principles of the layout, poster construction and general advertising. Credit 3(0-6).
- 313. Water-color Painting.** This course aims to give a working knowledge of color both from the standpoint of its use and enjoyment—various theories of color are analyzed along with drills on the techniques of water-color painting. Credit 3(0-6). Prerequisite: 311.
- 314. Art Appreciation.** This is an introductory course to the study of fine arts. Basic qualities of various forms of artistic expression are explained. Emphasis is placed on the application of art principles in everyday life. Credit 2(2-0).
- 315. Art Appreciation.** This course is a study of the art historic periods. Representative examples of the architecture and sculpture of ancient Egypt, Greece and Rome are selected for analysis, interpretations and comparisons. Credit 2(2-0).
- 316. Art Appreciation.** This course traces the development of the art of painting from the Italian Primitives through the English School by means of analysis and comparisons of works of representative painters. Credit 2(2-0).
- 317. Color & Design.** This course deals with the theory of color and principles of pure design as applied in Textiles. The development of decorative motifs, all-over patterns, sources of design. Fall. Credit 3(1-5).
- 318. Intermediate Design.** This course is a continuation of 317 with greater emphasis on the development of the student's creative ability. Introduction of block printing and stenciling. Credit 3(1-5).
- 319. Advanced Design.** This course is a continuation of 318 with emphasis on applying basic principles to the production of industrial products work with looms, hand weaving, leather work and textile dyeing. Credit 3(0-6).
- 320. Figure Drawing.** This course is a study of the human figure with emphasis on Anatomy, body structure and human proportions, draped and undraped figures at rest and in action. Spring. Credit 3(1-5).
- 321. Commercial Art.** This is an advanced course in Freehand Drawing—with considerable emphasis on the techniques of mediums used in commercial art—laboratory drills in sketching and rendering in pen and ink and wash. Prerequisite: 313. Credit 3(0-6).
- 322. Commercial Art.** This is a continuation of 321. In this course water color and show-card color are used with continued drills in laboratory techniques suitable for reproduction—cartooning. Prerequisite: 321. Credit 3(0-6).
- 323. Commercial Art.** This course aims at guiding the student towards such specific branches of commercial art as book jacket designs—layouts for newspapers, designs for calendars, greeting cards, magazine illustration, posters, etc. Prerequisite: 322. Credit 3(0-6).

- 324. History of Architecture.** This first course is a study of the beginning of Ancient and Classical Architecture. Credit 5(5-0).
- 325. History of Architecture.** This course is a continuation of the first course including Middle Ages and Renaissance. Prerequisite: Art 324. Credit 5(5-0).
- 326. History of Architecture.** A study of modern architecture is covered in this course with particular emphasis placed on modern housing. Prerequisite: Art 325. Credit 5(5-0).
- 327. Art Appreciation.** This course is a study of the arts in America. Beginning with a study of the crafts and continuing through American Architecture, representative personalities and their works are studied, analyzed and interpreted. Credit 2(2-0).
- 328. Art Appreciation.** This course traces the development of the art of sculpture in America from the Revolutionary period to the present era. Credit 2(2-0).
- 329. Art Appreciation.** This course traces the development of the art of painting in America from the Revolutionary period to the present era. Emphasis is placed on analysis and interpretation of representative works. Credit 2(2-0).
- 331. Composition.** This course is a study of the basic principles of pictorial composition or designing the picture with definite consideration of the requirements of commercial art, drills in abstract arrangements of dark and light. Credit 2(0-4).
- 332. Composition.** This course is a continuation of 331 with emphasis on the study of accessories, figure arrangement and expression. Prerequisite: 331. Credit 2(0-4).
- 333. Composition.** This course is a continuation of 332 with the introduction of a wide range of assigned topics or themes to be illustrated with original pictures. Emphasis is placed on originality, design, and expression. Credit 2(0-4).
- 334. Portrait.** This course consists of drawing from the antique or cast drawing as a foundation for drawing from life. Basic considerations in modeling in full scale of values are studied and practiced: medium, charcoal. Credit 2(0-4).
- 335. Portrait.** This course is a study of the techniques in the reproduction of photographs in charcoal and pastel. Emphasis on laboratory techniques. Prerequisite: 334. Credit 2(0-4).
- 336. Portrait.** This course is a study of the technique of portraiture. Studies are made from living models with emphasis on composition and expression. Prerequisite: 335. Credit 2(0-4).
- 337. Elementary Ceramics.** Art principles applied in the field of Ceramics. Study of the historical development, materials and processes, structural forms, simple exercises in modeling in clay. Supplementary reading and laboratory practice. Fall. Credit 3(1-5).

- 338. Ceramics.** This is an intermediate course. Emphasis is placed on laboratory techniques, casting, approved practices and procedures. Winter. Credit 3(1-5).
- 339. Advanced Ceramics.** Much attention is devoted to modern methods of production, building of Armatures and casting in plaster. Making of moulds, one piece, waste moulds and piece moulds, decorative processes in relation to glazing and firing. Creative thought is stimulated by composition of original designs and collecting and analysis of contemporary works. Prerequisite: 338. Credit 3(1-5).
- 341. Figure Drawing.** This course is a study of the human figure from life. A study of the full length figure with emphasis on proportion, action and modeling in full values. Credit 3(0-6).
- 342. Figure Drawing.** This course is a continuation of 341 with emphasis on laboratory techniques in drawing and painting from life. Credit 3(0-6).
- 347. Oil Painting.** This course is an advanced study of oil painting. Emphasis is placed on the technique of oil painting, still life, landscapes and portrait. Credit 3(0-6).
- 348. Oil Painting.** This course is a continuation of 347 with emphasis on the development of original themes. Prerequisite: 347. Credit 3(0-6).
- 349. Oil Painting.** This course is a continuation of 348 with emphasis on originality of subjects and treatment. Credit 3(0-6).

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#### DEPARTMENT OF FOREIGN LANGUAGES

The department aims to develop reasonable facility in the reading, speaking, and writing of the principal modern foreign languages. It endeavors, furthermore, to lead students to an intelligent appreciation of outstanding literary masterpieces, to develop a better knowledge of continental contributions to modern culture, and to create a spirit of understanding that will result in proper attitudes toward different national groups.

Elementary French courses 211, 212, 213 are recommended for those students who have no previous knowledge of French, or who present one unit of high school credit. For those students presenting two units of high school credit, Intermediate French courses 214 and 215 are required. However, if students with two units of high school French should take Elementary French, they are required to complete 15 hours on the same level.

The following courses are suggested as majors and minors and are recommended for those interested in graduate study, research, government service, or commerce.



For Freshman and Sophomore Courses, see page 59.

### Major in Foreign Languages

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
French 214, 215, 216-----	5 (5-0)	5 (5-0)	5 (5-0)
French 217, 218, 219-----	3 (3-0)	5 (5-0)	5 (5-0)
Spanish 211, 212, 213-----	5 (5-0)	5 (5-0)	5 (5-0)
Minor or Electives -----	5 (5-0)	3 (3-0)	3 (3-0)

#### Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
French 221, 222, 223-----	5 (5-0)	5 (5-0)	5 (5-0)
French 231, 245, 247-----	5 (5-0)	5 (5-0)	5 (5-0)
Spanish 214, 215, 216-----	5 (5-0)	5 (5-0)	5 (5-0)
Minor or Electives -----	3 (3-0)	3 (3-0)	3 (3-0)

### COURSES IN FRENCH

- 211. Elementary French.** Special attention is given to gaining a complete knowledge of the essentials of grammar and pronunciation, to the acquisition of a vocabulary, and to elementary composition. Fall. Credit 5(5-0).
- 212. Elementary French.** This course continues the work in grammar and pronunciation. Conversation and dictation are encouraged. Winter. Credit 5(5-0).
- 213. Elementary French.** Practice in oral and written composition is continued. The early acquisition of a taste for advanced French is stimulated through the reading, translation, and interpretation of easy modern French prose. Spring. Credit 5(5-0).
- 214. Intermediate French.** This course is open to students who have completed two units of high school French or college French 211, 212, 213. A brief review of grammar is followed by practice in pronunciation. Fall. Credit 5(5-0).
- 215. Intermediate French.** The reading of French plays is encouraged, and the ability to write and converse in French is further developed. Winter. Credit 5(5-0).
- 216. Phonetics.** This course is intended for students majoring and minor-ing in French. It is also recommended for those who wish to improve their pronunciation of the language. Spring. Credit 5(5-0).
- 217. French Literature of the Middle Ages and the Renaissance.** A general introduction to the more advanced study of French literature. its purpose is to give a clear idea of the great periods and the main tendencies in the history of French thought and letters from the Middle Ages to the Seventeenth Century. Fall. Credit 5(5-0).

- 218. Advanced French Composition.** An advanced course in oral and written self-expression in French. Special attention is given to vocabulary building, free composition, and conversation, prepared and improvised, covering the many phases of everyday activities. Spring. Credit 5(5-0).
- 219. Advanced French Conversation.** A course for students having some experience in written French. It aims to improve oral and aural conversation. Some groups will be arranged for practice in French conversation. Spring. Credit 5(5-0).
- 220. Advanced French Grammar and Reading.** The object of this course is to give the student practical training in the use of advanced French grammar and reading. It is conducted largely in French. Spring. Credit 5(5-0).
- \*221. French Literature in the Seventeenth Century.** This course presents Classicism through the masterpieces of Corneille, Racine, Moliere and other authors of the "Golden Period" in French letters. Conducted in French. Fall. Credit 5(5-0).
- \*222. French Literature of the Eighteenth Century.** The object of this course is to study in particular the life and works of Montesquieu, Voltaire, Rousseau, and the Encyclopedists. Conducted in French. Winter. Credit 5(5-0).
- \*223. French Literature of the Nineteenth Century.** The object of this course is to study the great literary currents of the nineteenth century, romanticism and realism. Spring. Credit 5(5-0).
- 231 (Formerly 243). Modern and Contemporary French Literature.** This course deals with the chief writers and literary currents of the time. Lectures and outside readings. Credit 3(3-0).
- 245. French Civilization.** A general survey of the history of France, with emphasis on its social, political and economic developments designed to give the student an understanding of present conditions and events. A detailed study is made of such French institutions as art, music and education. This course is also offered in conjunction with reports on collateral readings. Credit 5(5-0).
- 246. French Seminar. Thesis Problem.** Open only to seniors majoring in Foreign Languages. Credit 3(3-0).
- 247. French for Prospective Teachers.** This course is elective for seniors with the consent of the instructor. A brief review of the principles of grammar is followed by an intensive drill in phonetics. Aims, problems, methods, and texts are discussed. Spring. Credit 3(3-0).

### COURSES IN SPANISH

- 211. Elementary Spanish.** The primary object of this course is to secure the understanding of easy Spanish, written and spoken. Much attention is given to the essentials of grammar and pronunciation. Fall. Credit 5(5-0).

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\* Offered in alternate years. Not offered in 1949-50.

- 212. Elementary Spanish.** This course continues the work in grammar and pronunciation. Prose reading is encouraged by exercises in vocabulary building. Winter. Credit 5 (5-0).
- 213. Elementary Spanish.** Attention is given to advanced elementary grammar. Prose reading continues and a taste for advanced Spanish is stimulated through the reading of poetry.
- 214. Intermediate Spanish.** This course is open to students who have completed two units of high school Spanish or college Spanish 211, 212, 213. Thorough review of Spanish syntax with emphasis on its essential difficulties. Fall. Credit 5 (5-0).
- 215. Intermediate Spanish.** Practice in writing idiomatic Spanish in translations and free compositions. Readings from modern authors. Winter. Credit 5 (5-0).
- 216. Survey of Spanish Literature.** A survey of the most important movement, writers, and works from the Middle Ages up to the present time. Spring. Credit 5 (5-0).

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## DEPARTMENT OF HOME ECONOMICS

The program as outlined below is arranged to meet the needs of the following groups of students: those who wish to teach, those who wish to enter graduate courses leading to technical or professional work, and those who wish to apply their knowledge to various problems of home life, or in fields of industry and social service in which an understanding of home economics subjects is essential to intelligent action.

Students who specifically qualify in personality, desire and ability, for work with The Cooperative Agriculture Extension Service, will be guided in selecting courses necessary for proper preparation for that work.

The training given is as varied as it is broad. It includes a knowledge of laws of health; an understanding of the sanitary requirements of the home; the study of values, both absolute and relative, of the various articles used in the home; the wise expenditure of money, time, and energy; the scientific principles underlying the selection and preparation of food; the right care of children; and the ability to secure efficient service from others.

(For dressmaking trade courses, see page 174.)

A four-year college course in home economics will lead to a B.S. degree in Home Economics.

## COURSES IN HOME ECONOMICS LEADING TO THE DEGREE OF B.S.

	Freshman Year		
	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Orientation, Ed. 211 -----	1 (1-0)	-----	-----
English Composition, Eng. 211, 212, 213----	5 (5-0)	5 (5-0)	5 (5-0)
General Chemistry, Chem. 111, 112, 113----	5 (3-4)	5 (3-4)	5 (3-4)

Clothing 123 -----	-----	-----	3 (2-2)
Food Principles, Foods 121 -----	-----	-----	4 (2-3)
Elementary Clothing, Clothing 111 -----	3 (1-4)	-----	-----
General Psychology, Ed. 221 -----	-----	5 (5-0)	-----
Art Appreciation 314, 315, 316 -----	2 (2-0)	2 (2-0)	2 (2-0)
Physical Education 210 a, b, c -----	1 (0-2)	1 (0-2)	1 (0-2)
Home Economics Orientation 111 -----	3 (3-0)	-----	-----
Freehand Drawing 312, 317 -----	3 (0-6)	3 (1-5)	-----

**Sophomore Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Personal Hygiene -----	-----	1 (1-0)	-----
English -----	-----	5 (5-0)	-----
*Education 223 -----	3 (2-2)	-----	3 (3-0)
Physiology, Zool. 122 -----	-----	5 (3-4)	-----
Meal Planning and Table Service, Foods 123 -----	-----	-----	4 (2-4)
Design and Construction, Cloth. 112 -----	-----	3 (1-4)	-----
Consumer Buymanship and Family Economics, H. E. 123 -----	-----	3 (3-0)	-----
Sociology 231 or Economics 231 -----	5 (5-0)	-----	-----
Bacteriology, Bact. 123 -----	-----	-----	5 (4-3)
Art Appreciation, Art 327, 328, 329 -----	2 (2-0)	2 (2-0)	2 (2-0)
Physical Education 220 a, b, c -----	1 (0-2)	1 (0-2)	1 (0-2)
Negro History, Hist. 213 -----	-----	-----	5 (5-0)

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 314 -----	-----	5 (4-2)	-----
Education 237 -----	-----	-----	3 (3-0)
Housing, H. A. 112 -----	-----	3 (2-0)	-----
Principles of Nutrition, Foods 141 -----	-----	4 (2-4)	-----
Ed. Psychology, Ed. 231 -----	3 (3-0)	-----	-----
Child Development, H. A. 131A -----	4 (3-2)	-----	-----
U. S. History, Hist. 221 or 222 -----	-----	5 (5-0)	-----
Family Relationships, H. A. 132 or Family, Soc. 241 -----	-----	3 (3-0)	-----
Nursery School Education, H. A. 131B -----	4 (2-4)	-----	4 (2-4)

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Clothing Construction, Clo. 143 -----	-----	3 (1-4)	-----
Methods of Teaching Home Economics, Ed. 152A -----	3 (3-0)	-----	-----
Organization of Home Economics Courses in Schools, Ed. 152B -----	3 (3-0)	-----	-----
Supervised Practice Teaching, Ed. 153 -----	-----	5 (1-8)	-----
Government, Pol. Sc. 231 or 232 -----	5 (5-0)	-----	-----
Home Management Residence, H. A. 142 -----	-----	3 (0-8)	3 (0-8)
Family Health, H. A. 143 -----	-----	-----	2 (1-2)
Electives -----	7 (7-0)	9 (9-3)	9 (9-0)

\* See additional requirements in Education on pages 105 and 106.

### Required Courses

**H. E. 111. Orientation Course.** This course is concerned with aiding in the solution of the immediate problems of personal and group living as the freshman girls find them at college. Required of all Home Economics freshman girls. Credit 3(3-0).

### FOODS AND NUTRITION

**Foods 121. Food Principles.** Food selection based on personal needs, techniques of food preparation, preservation and care in the home. Prerequisite: General Chemistry. Credit 4(2-4).

**Foods 123. Meal Planning and Table Service.** Planning and serving of adequate, attractive, low cost meals with emphasis on family meals. Consumer buying problems will be included. Prerequisite: Foods 121. Credit 4(2-4).

**Foods 141. Principles of Nutrition.** A study of food needs for the various ages, and planning diets for family groups based on the needs. Prerequisites: Food 121, Organic Chemistry, Physiology. Credit 4(2-4).

### CLOTHING

**Clothing 111. Elementary Clothing.** This course deals with the fundamental processes of clothing construction, a study of the use of the Commercial pattern and problems in wardrobe planning. Credit 3(1-4).

**Clothing 112.** The study of art in relation to clothing, construction; problems in repairing and remodeling and in the selection of clothing for the family. Credit 3(1-4).

**Clothing 123. Textiles.** A study of textile fabrics, their source, production, characteristics and identification tests. The social, economic, and hygienic aspects of and the care of clothing and household textiles. Credit 3(2-2).

**Clothing 143.** Problems in pattern design and construction. Credit 3(1-4).

### HOME IMPROVEMENT UNITS

**H. I. 142. Home Improvement Units.**

Unit I. Floriculture.

Unit II. Home Gardening.

Unit III. Poultry.

Unit IV. Applied Electricity in the Home.

Unit V. General Woodwork for the Home.

The course is planned to give students fundamental principles and experiences in the above units.

Educational programs for training in household employment are, for the most part, short, intensive courses designed to give training in those phases of work which employees are most frequently called upon to do.

Each unit in the course listed above may be taken separately, and may be completed in approximately two weeks. Credit 1(0-5).



**HOME ADMINISTRATION****Home Management**

- H. A. 123. Consumer Buymanship and Family Economics.** This course deals with developing attitudes and habits in consumer-buying and management of family resources. Credit 3(3-0).
- H. A. 112. Housing.** Planning, selecting and equipping the house, with emphasis on family needs, income, and artistic arrangement. Credit 3(3-0).
- H. A. 142. Residence.** Experience in applying basic principles in Home Economics to the management of the home and the development of proper attitudes essential to family and group living. Credit 3(3-0).

**Family**

- H. A. 132. Family Relationships.** A course designed to develop an objective point of view of home life in order to give better appreciation of the problems arising in the family and develop some ability to attack them thereby improving family and community life. Credit 3(3-0). Sociology 241 may be substituted.
- H. A. 131-A. Child Development.** Study of the physical, mental, and social growth of the child up to five years. Observation and care of children in nursery school are required. Prerequisites: Education 221-231. Credit 4(3-2).
- H. A. 143. Family Health.** Problems in family, personal and community health. Credit 2(1-2).
- H. A. 131-B. Nursery School Education.** Further study of the mental and social growth of the young child with emphasis on observational reports and child guidance. A laboratory period in nursery school is required. Prerequisites: Education 221, Education 231, H. A. Credit 4(2-4).

**ELECTIVES IN HOME ECONOMICS**

- Art 112. Costume Designing.** A study of the principles as they apply to dress, consideration of individual requirements, and a brief survey of historic costume. Winter. Credit 3(1-4).
- Foods 142. Special Problems in Foods.** Problems in working with such classes of foods as might be of specific interest to the individual student. Emphasis on developing skill in production in the line chosen. Prerequisites: All required foods courses. Credit 4(2-4).
- Foods 114. Nutrition for Infants and Young Children.** A study of the nutritional needs and planning and preparing of meals for this specific age level. Credit 3(1-4).
- Foods 115. Nutrition.** An elementary course in nutrition, designed to acquaint the individual with the food needs of the body. A scientific background is unnecessary. Home Economics majors do not receive credit for this course. Credit 2(1-2).

**Clothing 114. Construction.** A vocational course designed to teach fundamental skills in sewing and to solve special problems of clothing. Credit 3(1-4).

**Clothing 115. Construction.** A vocational course designed for the individual needs in construction, selection and renovation. Prerequisite: Clothing 114. Credit 3(1-4) or 6(2-8).

**Clothing 121. Home Crafts.** The course provides practical experience in upholstering, making slip covers, draperies. Credit 3(1-4).

**Clothing 124. Home Crafts.** The course aims to develop appreciation for and some ability to create attractive homework for the home, such as batiking, blockprinting, stenciling. Credit 3(1-4).

**H. A. 111. Practical Nursing of Young Children.** Child care and training with emphasis on the nature of the young child and its needs. Experience with children in the laboratory period in nursery school is required. Credit 3(1-4).

## DEPARTMENT OF INDUSTRIAL EDUCATION

The public schools of North Carolina, like the public schools of many states, are in constant need of securing qualified teachers of industrial education. To meet the needs, A. and T. College offers training in these fields of concentration.

### TEACHER TRAINING FOR INDUSTRIAL ARTS EDUCATION

The prospective teacher of industrial arts education receives general college training in addition to general training in the manipulative skills of several trades. In addition, he is given instruction in shop organization, shop management, and in the essential professional courses for teachers.

The fields of concentration in teacher-training for industrial arts education are automobile mechanics, masonry, welding, machine shop practice, woodworking, carpentry, mechanical drawing, vocational drawing, electricity, ceramics, and textiles. Radio servicing.

### CURRICULUM FOR INDUSTRIAL ARTS EDUCATION

#### Freshman Year

(See First Year's Curriculum of Mechanic Arts, page 55.)

#### Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 321, 322, 323-----	5(4-2)	5(4-2)	5(4-2)
Advanced Woodwork, I. A. Ed.			
321, 322, 323-----	5(0-10)	5(0-10)	5(0-10)
Freehand Drawing, Art 311, 312, 313-----	3(0-6)	3(0-6)	3(0-6)
Military Science, M. Sc. 221, 222, 223-----	2(2-2)	2(2-2)	2(2-2)
Materials of Construction, I. A. Ed. 324-----	3(3-0)	-----	-----

Mechanical Drawing, M. E. 323-----	-----	-----	3 (0-6)
Machine Shop Practice, M. E. 328, 329-----	2 (0-4)	2 (0-4)	-----
Introduction to Education, Ed. 222-----	-----	3 (2-2)	-----
Phy. Ed. 220 -----	-----	-----	1 (0-2)
	20 Hrs.	20 Hrs.	19 Hrs.

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Woodturning, Upholstery, Finishing			
I. A. Ed. 338, 339, 340-----	3 (0-6)	3 (0-6)	3 (0-6)
Vocational Drawing, I. A. 331, 332, 333-----	3 (0-6)	3 (0-6)	3 (0-6)
Introduction to Guidance, Ed. 233-----	-----	3 (3-0)	-----
Vocational Guidance, Ed. 332-----	-----	-----	3 (3-0)
Rural Sociology, R. Soc. 501-----	3 (3-0)	-----	-----
Economics, Econ. 231, 234-----	-----	5 (5-0)	5 (5-0)
Educational Psychology, Ed. 231-----	-----	-----	3 (3-0)
Public Speaking, Eng. 224-----	3 (3-0)	-----	-----
Adolescent Psychology, Ed. 223-----	-----	-----	3 (2-2)
Masonry 311, 314 -----	3 (0-6)	3 (0-6)	-----
Carp. 313, 314 -----	3 (0-6)	3 (0-6)	-----
Philosophy of Education, Ed. 224-----	3 (3-0)	-----	-----
	21 Hrs.	20 Hrs.	20 Hrs.

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Electricity, I. A., Ed. 326, 327, 328-----	3 (0-6)	3 (0-6)	3 (0-6)
Auto Mechanics, I. A., Ed. 325-----	-----	3 (0-6)	-----
Principles of Sociology, Soc. 231-----	5 (5-0)	-----	-----
Materials, Equipment and Shop			
Management, I. A., Ed. 347-----	-----	3 (3-0)	-----
History of Industrial Education			
I. A., Ed. 341-----	-----	3 (3-0)	-----
Observation and Practice Teaching in			
Industrial Education, Ed. 344-----	-----	-----	5 (5-0)
Trade Analysis, Ed. 341-----	3 (3-0)	-----	-----
Methods of Teaching Industrial			
Education, Ed. 343 -----	-----	5 (5-0)	-----
Art 318, 339 -----	-----	3 (0-6)	3 (1-5)
Phy. Ed. 234 -----	5 (5-0)	-----	-----
Principles of Secondary Ed., Ed. 237-----	3 (3-0)	-----	-----
	19 Hrs.	20 Hrs.	11 Hrs.

**Suggested Electives**

Carpentry 312 -----	3 Hrs.
Cabinetmaking 312, 313, 314-----	3 Hrs.
Woodturning, Upholstering, and Finishing,	
I. A. 338-A, 339-A, 340-A-----	3 Hrs.
Comprehensive Shop Projects, I. A. Ed. 348-----	3 Hrs.

## TRAINING FOR VOCATIONAL INDUSTRIAL EDUCATION

a. Teacher. The prospective teacher of Vocational Industrial Education receives general college training in addition to specific training in the manipulative skills of a trade. In addition, he is given instruction in shop management, and in the essential professional courses for teachers. To meet these requirements, the student should select option I curriculum of the Vocational Industrial Education program.

The fields of concentration in teacher-training for industrial education are automobile mechanics, cabinetmaking and upholstery, carpentry, masonry, mechanical drawing, plumbing and steam fitting, shoe repairing, machine shop practice, tailoring, and radio servicing.

b. Non-teacher. This course is designed to meet the needs of students who desire to have practical experience and knowledge of the subject-matter, as well as, the technical training required for effective service in such vocations as automobile mechanics, carpentry, cabinetmaking, and upholstery, masonry, mechanical drawing, machine shop practice, plumbing, shoe repairing, tailoring, welding, and radio servicing. In addition, he may elect specified professional teacher-training courses. To meet these requirements, the student should select option II of the Vocational Industrial Education Curriculum.

## CURRICULUM FOR VOCATIONAL INDUSTRIAL EDUCATION

### Freshman Year

See First Year's Curriculum of Mechanic Arts, page 55.

### Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Industrial Lab., VI, Ed. 321, 322, 323-----	7 (2-10)	7 (2-10)	7 (2-10)
Physics 321, 322, 323-----	5 (4-2)	5 (4-2)	5 (4-2)
Military Science 221, 222, 223-----	2 (2-2)	2 (2-2)	2 (2-2)
Economics 231, 234 -----	-----	5 (5-0)	5 (5-0)
Materials of Construction I. A., Ed. 324-----	3 (3-0)	-----	-----
Mechanical Drawing, M. E. 323-----	3 (0-6)	-----	-----
Machine Shop Practice, M. E. 328, 329-----	-----	2 (0-4)	2 (0-4)
	<hr/>	<hr/>	<hr/>
	20 Hrs.	21 Hrs.	21 Hrs.

### OPTION I\*

### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Industrial Lab. V. I. Ed. 331, 332, 333-----	7 (2-10)	7 (2-10)	7 (2-10)
Freehand Drawing, Art 311, 312, 313-----	3 (0-6)	3 (0-6)	3 (0-6)
Public Speaking, Eng. 224-----	3 (3-0)	-----	-----
Adolescent Psychology, Ed. 223-----	-----	-----	3 (2-2)
Introduction to Education, Ed. 222-----	-----	3 (3-0)	-----
Introduction to Guidance, Ed. 233-----	-----	3 (2-2)	-----
Philosophy of Education, Ed. 224-----	-----	-----	3 (3-0)

\* Students who plan to become Trade Teachers take Option 1.

Physical Education, Phy. Ed. 234-----	5 (5-0)	-----	-----
Vocational Drawing, I. A. Ed. 331, 332, 333---	3 (0-6)	3 (0-6)	3 (0-6)
Physical Education, Phy. Ed. 220a, 220b-----	-----	1 (0-2)	1 (0-2)
	21 Hrs.	20 Hrs.	20 Hrs.

**Senior Year**

Industrial Lab. V. I. Ed. 341, 342, 343-----	7 (2-10)	7 (2-10)	7 (2-10)
Principles of Sociology, Soc. 231-----	5 (5-0)	-----	-----
Materials, Equipment, and Shop Management, I. A. Ed. 347-----	-----	3 (3-0)	-----
Methods of Teaching Industrial Education, Ed. 343-----	-----	5 (5-0)	-----
Rural Sociology, Soc. 501-----	3 (3-0)	-----	-----
Observation and Practice Teaching in Ind. Ed., Ed. 344-----	-----	-----	5 (5-0)
Trade Analysis, Ed. 341-----	3 (3-0)	-----	-----
Educational Psychology, Ed. 231-----	3 (3-0)	-----	-----
Vocational Education, Ed. 331-----	-----	3 (3-0)	-----
Vocational Guidance, Ed. 332-----	-----	3 (3-0)	3 (1-4)
Principles of Secondary Ed., Ed. 237-----	-----	-----	3 (3-0)
	21 Hrs.	21 Hrs.	18 Hrs.

**OPTION II\*\*****Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Industrial Lab. V. I., Ed. 331, 332, 333-----	7 (2-10)	7 (2-10)	7 (2-10)
Freehand Drawing, Art 311, 312, 313-----	3 (0-6)	3 (0-6)	3 (0-6)
Public Speaking, Eng. 224-----	2 (2-0)	-----	-----
Business Adm. 351, 353-----	5 (5-0)	-----	5 (5-0)
Contracts and Specifications, M. E. 327-----	-----	-----	3 (3-0)
Electives-----	3 Hrs.	8 Hrs.	-----
	20 Hrs.	18 Hrs.	18 Hrs.

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Industrial Lab. V. I., Ed. 341, 342, 343-----	7 (2-10)	7 (2-10)	7 (2-10)
Principles of Sociology, Soc. 231-----	5 (5-0)	-----	-----
Materials Equipment and Shop Management I. A. Ed. 347-----	-----	3 (3-0)	-----
Business Adm. 337-----	-----	-----	5 (5-0)
Electives-----	6 Hrs.	8 Hrs.	6 Hrs.
	18 Hrs.	18 Hrs.	18 Hrs.

\*\* Students who plan to go into business, take Option 2.



**DESCRIPTION OF COURSES IN INDUSTRIAL EDUCATION****Courses in Industrial Arts Education**

- 321. Advanced Woodwork.** Emphasis is placed on the practical operation of such machines as variety saw, band saw, radial saw, planer, mortiser, shaper, tenon machine, belt and drum sanding machines. Credit 5(0-10).
- 322. Advanced Woodwork.** Further emphasis placed on the use of power machinery so that the student may develop facility in their use. The principles of panel construction, the various ways of tenoning, proper methods of gluing, and the most practical methods of laying out work are demonstrated. Prerequisite: I. A. Ed. 321. Credit 5(0-10).
- 323. Advanced Woodwork.** Construction of projects from drawings or blueprints. Also care of power machines, saw filing, band saw brazing, sharpening and setting planer knives are part of the course. Prerequisite: I. A. Ed. 322. Credit 5(0-10).
- 324. Materials of Construction.** A study of the manufacture and physical properties of iron, steel, timber, cement, concrete, and other materials encountered in technical fields, and the A. S. T. M., specifications and methods of testing. Prerequisite: Chem. 113. Credit 3(3-0).
- 325. Automobile Mechanics.** This course takes in the maintenance and operation of the automobile, principles of the four-cycle engine, and the ignition system. Credit 3(0-6).
- 326. Electric Wiring.** This course covers the fundamental principles of two- and three-wire circuits for light and power. It also considers the study of and use of electrical wiring materials and electrical codes. Credit 3(0-6).
- 327. General Electricity.** Instruction and laboratory practice covering fundamental principles of direct and of alternating current equipment. Study of meters, motors, generators, armature winding and alternating current circuits. Study of home appliances are made an integral part of the course. Credit 3(0-6).
- 328. Electrical Projects.** The intent of this course is to provide teachers of electricity in junior—or senior high schools with sufficient material and data to enable them to cope successfully with the problem of electrical projects for class construction. The course also gives the student a working knowledge of the more important principles upon which radio transmission and reception are accomplished. Credit 3(0-6).
- 331. Vocational Drawing.** Correlation between mechanical drawing and shop projects. Elementary principles of industrial arts design. Prerequisite: M. E. 311, 312. Credit 3(0-6).
- 332. Vocational Drawing.** Proportion, balance, and gracefulness in design of shop projects. Prerequisite: I. A. 331. Credit 3(0-6).
- 333. Vocational Drawing.** Designing of school shops; selection and location of equipment with respect to use and economy. Prerequisite: I. A. 332. Credit 3(0-6).

- 338. Wood-turning.** Thorough drill in the cutting action of turning tools and methods of holding them. Projects in spindle and in face plate turning are selected for practice. Instruction is also given in finishing and polishing on the lathe. Credit 3 (0-6).
- 338A. Wood-turning.** Instruction is given in elaborate and more intricate types of turning than are given in I. A. 338. Projects involving spherical and spiral turning are included. Credit 3 (0-6).
- 339. Upholstery.** Instruction includes caning and seat wearing method of upholstering a plain board surface, methods of fastening webbing, burlap and its uses, upholstery with springs, hard-edge upholstery, and spring edge upholstery. Credit 3 (0-6).
- 339A. Upholstery.** A continuation of 339, including construction or rebuilding of an upholstered project. Credit 3 (0-6).
- 340. Wood Finishing.** Instruction is given in the mechanical preparation of wood before staining, the preparation and use of stains and the application of different classes of commercial stains, kinds of fillers—their preparation and application, surface or refinishing coats, such as wax, oil, shellac, varnish, paint, and enamel. Credit 3 (0-6).
- 340A. Wood Finishing.** Refinishing, French polishing, and special work in finishing and polishing on the lathe. Credit 3 (0-6).
- 341. History of Industrial Education.** A foundation and orientation course in industrial education. Familiarizes the student with the underlying philosophy, the basic principles, the prevailing practices and the accepted terminology in trade and industrial educations. Credit 3 (3-0).
- 347. Materials, Equipment and Shop Management.** The problems of equipping and arranging trades and industrial art shops and the care of tools and materials, safety first, and management are discussed. Credit 3 (3-0).
- 348. Comprehensive Shop Projects.** The student will be required to engage in such practical work as his individual needs seem to warrant. This work may include general construction and/or repair, maintenance work or advanced project involving wood turning, carving, inlaying, upholstering, and wood finishing. Credit 3 (0-6).

### COURSES IN VOCATIONAL INDUSTRIAL EDUCATION

The student must decide at the beginning of the second year the field of his major interest, and he must choose the industrial laboratory course suitable to that field. The field of interest is designated by the letter immediately following the course number; that is, V. I., Ed. 321-A would indicate that the student is pursuing his major work in the field of automobile mechanics.

The industrial laboratory courses 321, 322, 323, 331, 332, 333, 341, 342, 343 may be in automobile mechanics, carpentry, cabinetmaking and upholstery, masonry, mechanical drawing, plumbing and steam-fitting, shoe repairing, tailoring, machine shop practice and radio servicing.

Students in Vocational Industrial Education will spend one quarter during their senior year on the campus, where they will gain practical work relative to their field of study. They will be expected to contract for jobs, make out work orders, estimates, cost sheets and deliver the job complete to the customer. All work will be under the close supervision of the instructor and credit will be allowed for one of their Industrial Laboratory courses.

### **COURSES IN VOCATIONAL EDUCATION**

**331. Vocational Education.** A foundation and orientation course in vocational education. Familiarizes the student with a brief historical background of concepts and developments in vocational education. Emphasis is placed upon the need of vocational education in democracy. Special consideration is given to the study of the evolution of the underlying philosophy and basic principles of vocational education, as a phase of the general education program. Credit 3(3-0).

**332. Vocational Guidance.** Formerly 341. The problem of vocational guidance, its beginning, organization and administration in high schools. Special attention will be given to guidance in the Junior and Senior high school as it relates to the work of Industrial Arts. Fall. Credit 3(3-0).

**341. Trade Analysis.** Formerly 332. This course gives the students a knowledge of organizing trades and industrial arts courses. Emphasis is put on the selection of a line of useful and practical projects and the grouping of these projects in the order of their learning difficulties. Spring. Credit 3(3-0).

**343. Methods of Teaching Industrial Education.** Fundamental factors in teaching, agencies of education, classroom management, selection of problems and projects, job sheets and lesson plans. Winter. Credit 5(5-0).

**344. Observation and Practice Teaching in Industrial Education.** Practical experience in conducting unit trade and industrial arts programs will be afforded. Spring. Credit 5(5-0). (See also I. A. 341.)

### **For Graduates and Advanced Undergraduates**

Graduate work in industrial education aims to aid the promotion of industry by providing advanced technical training for those who plan to follow industrial careers and for teachers of industrial arts education or vocational industrial education. The department offers instruction for the following types of students: (1) those in the field who desire advanced training as teachers or supervisors of unit and general industrial arts shops in junior and senior high schools; and in schools of the smaller communities; (2) experienced tradesmen with the necessary teaching requirements who desire additional training in the development and conduct of programs of industrial education, especially those established under the Smith-Hughes Act; (3) teachers of related or cognate subjects; (4) others who desire further training in these fields.

- 602. Current Problems in Industrial Education.** Problems involving the analysis of objectives, curriculum content, types of equipment, and outcomes studied. Suggestions are considered for improving current practices. Projects in industrial relations, public relations, records and forms, literature in the area of industrial education, improvement of instruction, teaching aids and devices. Credit 3(3-0).
- 603. Industrial Psychology.** Application of principles of psychology to problems as industrial organization, management, production and efficiency. Credit 3(3-0).
- 604. Supervision and Administration of Industrial Education.** Relation of industrial education to the general curriculum and the administrative responsibilities entailed. Courses of study; relative costs; co-ordination problems; class and shop organization, and development of an effective program of supervision. Selection of teachers, and their improvement in-service. Of interest to school administrators, teachers of industrial arts, and vocational industrial subjects. Credit 3(3-0).
- 605. Time and Motion Study.** Techniques of time and motion study for the purpose of developing methods of efficiency in industry. Credit 3(3-0).
- 606. Research Problems in Industrial Education.** Conferences and studies using the several laboratories of the college as a basis for research. Individual or group studies may be selected to meet the needs of the individuals or groups as suggested by: Pupil study; instructional materials; experiment and development of programs with the publication of either a professional bulletin or technical manual as a goal. Credit 3(3-0).
- 620. Co-operative Training.** This course is designed to give the prospective teachers of vocational education a knowledge of the basic concepts and processes of co-operative work in general, with special attention to diversified occupations. Credit 3(3-0).
- 624. Laboratory Planning for Industrial Shops.** Study of the principles involved in the design, selection, location, installation, and care of equipment suitable for high school industrial arts laboratories or for vocational industrial departments. Credit 3(3-0).
- 631. General Industrial Programs.** Development of local, state, and national levels of day industrial schools, evening industrial schools, part-time day and evening schools. Their organization types, courses of study, scope of movement, study of special student groups, fees and charges, buildings and equipment. Credit 3(3-0).
- 632. Seminar in Industrial Education.** Investigations and discussions for advanced and mature persons who have had experience as teachers, supervisors, or principals, and are in direct contact with one or more phases of industrial education. Credit 3(3-0).

**634. Workshop in Industrial Education.** Individual and group problems will be undertaken, through organized and scientific effort to exhaust all possible resources for their solutions. These procedures may include the experiences of the supervisor and individuals of the group, library research, field trips, movies or any pertinent related source or sources. The ultimate aim is to arrive at a functional conclusion with the best possible solution for publication. Credit 3(3-0).

### DEPARTMENT OF MATHEMATICS

All freshmen are required to take a placement test in mathematics. Those failing this test must register for Mathematics 309.

A minimum of ten hours of mathematics is required for graduation from all schools except The School of Agriculture.

The following is suggested for those desiring a major and is recommended for those planning to do research work, graduate study or teach.

Those persons pursuing mathematics as a major should take Mathematics 313 in the freshman year and Physics 323 during their sophomore year.

For Freshman and Sophomore Courses, see page 59.

### MAJOR IN MATHEMATICS

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Calculus, Math. 321, 322, 323-----	5 (5-0)	5 (5-0)	5 (5-0)
Math. 314, 324 -----	5 (5-0)	-----	3 (1-4)
Minor or Electives -----	5 (5-0)	10 ( )	10 ( )

#### Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Differential Equations, Math. 331-----	-----	5 (5-0)	-----
Theory of Equations, Math. 316-----	-----	-----	5 (5-0)
Mechanics, Math. 326 -----	5 (5-0)	-----	-----
Mathematics, Math. 325 -----	-----	-----	5 (5-0)
Minor or Electives -----	10 ( )	10 ( )	5 ( )

### MATHEMATICS

#### Engineering Mathematics

#### Freshman Year

See First Year's Curriculum of Mechanic Arts, page 55.

#### Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Math. 321, 322, 323-----	5 (5-0)	5 (5-0)	5 (5-0)
B. A. 335 -----	5 (5-0)	-----	-----
Phy. Ed. or Mil. Sc. -----	2 (2-2)	2 (2-2)	2 (2-2)
Math. 314, 316 -----	-----	5 (5-0)	5 (5-0)
Physics 321, 322, 323-----	5 (3-4)	5 (3-4)	5 (3-4)
	<hr/> 17 Hrs.	<hr/> 17 Hrs.	<hr/> 17 Hrs.



**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
French 211, 212, 213-----	5 (5-0)	5 (5-0)	5 (5-0)
Math. 318, 331, 501-----	5 (5-0)	5 (5-0)	5 (5-0)
M. E. 331, 332, 333-----	5 (5-0)	5 (5-0)	5 (5-0)
Physics 332, 351, 352-----	5 (5-0)	5 (5-0)	5 (5-0)
	<hr/> 20 Hrs.	<hr/> 20 Hrs.	<hr/> 20 Hrs.

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Math. 504 -----	-----	-----	5 (5-0)
Math. 324 -----	-----	-----	3 (1-4)
Chemistry 141, 142 -----	6 (3-6)	6 (3-6)	-----
Physics 334, 335 -----	5 (1-4)	5 (1-4)	-----
Electives -----	5 Hrs.	5 Hrs.	8 Hrs.
	<hr/> 16 Hrs.	<hr/> 16 Hrs.	<hr/> 16 Hrs.

**COURSES IN MATHEMATICS**

**Undergraduates Only**

**309. Remedial Mathematics.** This course is designed to strengthen and review the student in the fundamentals of arithmetic, plane geometry, and algebra. Students who fail to pass the placement test are required to pass this course in addition to the regular mathematics requirements. Credit 3 (3-0).

**311. College Algebra.** Review of elementary topics, such as factoring, fractions, simple equations, exponents, and radicals. Other topics studied are quadratics, simultaneous quadratic equations, logarithms, binomial theorem progression, determinants and permutation. Prerequisite: High School Algebra. Credit 5 (5-0).

**312. Trigonometry.** Functions of angles and their practical applications to solution of problems, relations of acute logarithms of numbers and trigonometric functions, solutions of the right and oblique triangles by logarithms. Prerequisites: College Algebra and Plane Geometry. Credit 5 (5-0).

**313. Analytic Geometry.** A thorough study of cartesian coordinates, curves, loci, straight line, circle, polar coordinates conic sections completes the plane analytic geometry. Coordinates in space, loci, plane and straight line completes the course. Prerequisite: Math. 312. Credit 5 (5-0).

**314. History of Mathematics.** The History of Mathematics: This course is designed as an aid in the preparation of teachers of mathematics and includes a survey of the development of mathematics by chronological periods, with biographical references, illustrations of national and racial achievements, and discussions of the evolution of certain important topics of elementary mathematics. Credit 5 (5-0).

- 315. Mathematics of Business.** A basic course offered primarily for students of Business Administration. A study of elementary principles of mathematics as applied to investments, sinking funds, annuities, insurance, etc. The course is begun with a thorough study of interests—simple and compound. Credit 5(5-0).
- 316. Theory of Equations.** Methods of solving cubics, quadratics and other higher algebraic equations. Methods of approximating roots, systems of equations, elements of determinants. Prerequisite: Math. 313. Credit 5(5-0).
- 318. Elementary Mathematical Statistics.** A general course covering the use of graphs, frequency distributions, averages, measures of dispersion, etc., with an introduction to sampling and correlation; a basic course for all fields of application. Prerequisites: Math. 311, 315 and approval of instructor. Credit 5(5-0).
- 321. Differential Calculus.** The fundamentals of differential calculus; maxima and minima; rates; curve tracing and application of derivatives, etc. Prerequisite: Math. 313. Credit 5(5-0).
- 322. Integral Calculus.** Fundamentals of integral calculus, application of integrals to measurements of arcs, areas, and volumes, etc. Prerequisite: Math. 321. Credit 5(5-0).
- 323. Differential and Integral Calculus.** A continuation of integral calculus. Solution of equations, application of integrals, center of gravity, moments of inertia, double and triple integration. Prerequisite: Math. 322. Credit 5(5-0).
- 324. Surveying.** The method of using the compass, transit, tape and level in making plane surveys. Lectures and field work. Elementary stadia work. Prerequisite: Math. 312. Credit 3(1-4).
- 325. Survey Course in Mathematics.** A brief study of the meaning of the basic ideas of arithmetic, algebra, trigonometry, analytical geometry and calculus, and their relation to each other. Recommended for those who plan to teach mathematics. This course will not serve as a prerequisite for any other courses in mathematics. Prerequisite: Math. 323. Credit 5(5-0).
- 326. Mechanics.** The same as M. E. 331.  
Prerequisite: Math. 321. Credit 5(5-0).
- 331. Differential Equations.** Solution of standard types of differential equations. Emphasis given on application to numerous examples in electricity and mechanics. Prerequisite: Math. 323. Credit 5(5-0).
- 335. Applied Math.** This course consists of application of mathematics to practical problems that may arise in the field and shop. It helps the students to apply their mathematics to everyday problems. Credit 3(3-0).
- 336. Applied Math.** Continuation of 335 with emphasis placed on problems in respective fields. Prerequisite: 335. Credit 3(3-0).

**Advanced Undergraduates and Graduates**

- 501. Vector Analysis.** A study of the processes of vector analysis, with a treatment of the vector functions and operations as applied in theoretical work. Prerequisite: Math. 323. Credit 5(5-0).
- 502. Mathematics of Life Insurance.** Probability, mortality tables, life insurance, annuities, endowments, computation of net premiums, evaluation of policies, construction and use of tables. Credit 3(3-0).
- 503. Differential Equations.** Formulation of practical problems as solutions of differential equations, method of solving type forms, systems of equations, singular solutions, methods of approximation, an introduction to partial differential equation. Credit 5(5-0).
- 504. Numerical Computation.** Interpolation, numerical solution of equations, approximations, numerical integration, construction of tables. Credit 3(3-0).
- 506. Advanced Calculus.** Review of differentiation and integration, approximation of integrals, partial derivatives, line integrals, integral theorems, applications to geometry, physics and mechanics. Credit 5(5-0).
- 507. Mathematical Statistics.** Averages, moments, correlation, probability, the normal and Poisson's distributions, the Gram-Charlier series, the distribution of statistics, sampling of populations, the Lexis theory, Sheppard's corrections, maximum likelihood, and other selected topics. Credit 3(3-0).

**DEPARTMENT OF MECHANICAL ENGINEERING**

This curriculum offers a broad training in the scientific principles underlying mechanical engineering and correlates this by application to specific fields of machine design, heat power, heating, ventilating, refrigeration, thermodynamics, industrial management and manufacturing problems.

Lectures and class instruction are supplemented by laboratory investigations designed to emphasize the engineering and economic principles involved. Students admitted without credit in solid geometry will be required to take it during the freshman year without credit.

**CURRICULUM****Freshman Year**

See first year's Curricula of Mechanical Arts, page 55.

**Sophomore Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 321, 322, 323_____	5(3-4)	5(3-4)	5(3-4)
Mathematics 321, 322, 323_____	5(5-0)	5(5-0)	5(5-0)
Military Science 221, 222, 223_____	2(2-2)	2(2-2)	2(2-2)
Machine Shop Practice, M. E. 328, 329, 330__	2(0-4)	2(0-4)	2(0-4)
Mechanical Drawing 323 _____	3(0-6)	_____	_____

Mechanism M. E. 321	-----	-----	4 (3-2)
M. E. 317	-----	3 (0-6)	-----
Economics 231	-----	5 (5-0)	-----
Surveying Math. 324	-----	-----	3 (1-4)
	<hr/>	<hr/>	<hr/>
	20	19	21

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Electrical Engineering 321, 322, 323	5 (3-4)	5 (3-4)	5 (3-4)
Mechanics, M. E. 331, 332, 333	5 (5-0)	5 (5-0)	5 (5-0)
Heat Power Engineering, M. E. 336	-----	5 (5-0)	-----
Heating and Ventilating, M. E. 334, 335	3 (3-0)	3 (3-0)	-----
Materials of Construction, I. A. 324	3 (3-0)	-----	-----
Thermodynamics, Physics 332	5 (5-0)	-----	-----
Economics 234	-----	-----	5 (5-0)
Hydraulics M. E. 337	-----	-----	3 (3-0)
	<hr/>	<hr/>	<hr/>
	21	18	18

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Machine Design, M. E. 341, 342, 343	5 (5-0)	5 (3-4)	5 (3-4)
Heat Power Engineering, M. E. 344, 345	5 (4-2)	5 (3-4)	-----
Contracts and Specifications, M. E. 327	-----	-----	3 (3-0)
Internal Combustion Engines, M. E. 338	-----	5 (5-0)	-----
Mechanical Engineering Laboratory, M. E. 351, 352	-----	3 (0-6)	3 (0-6)
Testing Materials Lab., M. E. 346	2 (0-4)	-----	-----
Metallurgy, M. E. 339	3 (3-0)	-----	-----
Electives	3 Hrs.	-----	8 Hrs.
	<hr/>	<hr/>	<hr/>
	18	18	19

**Suggested Electives**

Commercial Law, B. A. 335  
Differential Equations, Math. 331  
Economics, Ec. 232  
Structures, A. E. 334  
Hydraulic Machinery, M. E. 347

**DESCRIPTION OF COURSES**

**311. Mechanical Drawing.** Instruction in proper use of drafting instruments and materials. Lettering. Applied Geometry. Emphasis placed upon accuracy and neatness. Credit 3 (0-6).

**312. Mechanical Drawing.** Continuation of M. E. 311. Fundamentals required for machine drawing including applied Geometry, Orthographic projection. Pictorial representation including isometric and oblique drawing. Sections. Prerequisite: M. E. 311. Credit 3 (0-6).

- 314. Descriptive Geometry.** Theory of projection: Solution of Theoretical and practical problems involving size, shape, and relative position of common Geometrical magnitudes such as points, lines, planes, curved surfaces and solids. Surface development and intersection. Credit 3(1-4).
- 317. Pattern Making.** Care and use of tools, principles of planing, squaring and laying out work. Laboratory practices and modern methods of pattern making. Woods used, glued joints, methods of building up draft shrinkage, coating and storage. Small individual projects. Credit 3(0-6).
- 321. Mechanism.** A study of various types of mechanisms employed in the design of machines such as linkage, belting, cams and followers, gears, cones and wheel trains. Prerequisite: M. E. 323, Math. 313. Credit 4(3-2).
- 323. Mechanical Drawing.** Drawing for the shop. Metal fastenings, springs, gears, detail and assembly drawings, tracings, methods of reproducing drawings. Prerequisite: M. E. 314. Credit 3(0-6).
- 327. Contracts and Specifications.** Elementary principles of contracts involving bids and bidders; methods of payment for contracts and extra work; preparation and writing of specifications. Prerequisite: Eng. 213. Credit 3(3-0).
- 328. Machine Shop Practice.** A study of the theory, construction and operation of various machine tools, such as lathes, milling machines, shapers and the use of special tools and measuring instruments. Prerequisite: M. E. 311. Credit 2(0-4).
- 329. Machine Shop Practice.** Construction of some project requiring the use of various machine tools and measuring instruments. Prerequisite: M. E. 328. Credit 2(0-4).
- 330. Machine Shop Practice.** Continuation of M. E. 329. Credit 2(0-4).
- 331. Mechanics.** Statics, analytical and graphic treatment of concurrent, non-concurrent systems of coplanar and non-coplanar forces, and parallel forces, couples, stresses in frames and trusses. Distribution forces, center of gravity, moment of inertia and radii of gyration of plane areas and solids. Prerequisite: Math. 323. Credit 5(5-0).
- 332. Mechanics.** Dynamics and Kinetics, Rectilinear and curvilinear motion of a particle, relative velocities and acceleration, rotary motion of a body, work and energy, plane motion of a body, impact, moment of momentum. Prerequisite: M. E. 331. Credit 5(5-0).
- 333. Strength of Materials.** Shear and bending moment diagrams, stresses in beams, shafts, and columns. Combined stresses, deflection in beams, reinforced concrete beams, fiber stresses in beams and their distribution. Tension, compression and torsion. Prerequisite: M. E. 332. Credit 5(5-0).



- 334. Heating and Ventilating.** A study of the theory, design and installation of hot air, direct and indirect steam, hot water and fan heating systems; central heating and temperature control. Computations for heat losses and size of principal equipment. Layout of piping, ducts and auxiliary apparatus. Lectures, recitations. Credit 3(3-0).
- 335. Heating and Ventilating.** Continuation of 334 with special attention given to air analysis and air conditioning. Discussion of methods of air refrigeration, distribution, humidity control and conditioning equipment. Lectures, recitations. Credit 3(3-0).
- 336. Heat Power Engineering.** A description and analytic study of the principles involved in the application and utilization of heat in the steam boiler, steam engine, steam turbine and power plant auxiliaries, elementary thermodynamics, fuels and combustion. Prerequisite: Physics 332. Credit 5(5-0).
- 337. Hydraulics.** Elementary principles of hydrostatics and hydrokinetics; laws of statics; dynamic pressure, flow of water through orifices, tubes, nozzles, weirs, pipe lines and open channels, hydraulic friction and accompanying losses; water measurements in pipes and open channels. Prerequisite: Physics 322. Credit 3(3-0).
- 338. Internal and Combustion Engines.** A study of the Otto and Diesel type of engines and their auxiliaries; fuel performance; design, applications and economics. Discussions, problems. Prerequisite: Physics 332. Credit 5(5-0).
- 339. Metallurgy.** Production of refined ferrous and non-ferrous metals from their ores; properties of metals and alloys as related to structure and treatment; heat treatment; microscopic examination; casting, shaping and welding. Prerequisite: Chem. 113. Credit 3(3-0).
- 341. Machine Design.** A study of the properties of materials, the stresses in machine parts and procedures in design calculations. Lectures, recitations and problems. Prerequisite: M. E. 321 and 333. Credit 5(5-0).
- 342. Machine Design.** Design of machine elements involving a consideration of static and dynamic forces, critical speeds and the application of the theories of strength and resistance of materials. Lectures, recitations and design periods. Prerequisite: M. E. 341. Credit 5(3-4).
- 343. Machine Design.** A study of the design of gears and gear trains, shafts, screw, springs, clutches and castings. Prerequisite: M. E. 342. Credit 5(3-4).
- 344. Heat Power Engineering.** A study of modern central and isolated power plants, fuels, combustion, boilers, settings, stoker, fuel and ash conveying systems and experimental tests. Prerequisite: M. E. 336. Credit 5(4-2).
- 345. Heat Power Engineering.** Continuation of M. E. 344 with special attention given to steam engines, steam turbines, condensers, pumps, economics of power plants and experimental tests on various plant auxiliaries. Credit 5(3-4).

**346. Testing Materials Laboratory.** Laboratory work devoted to experiments and standard tests on various engineering materials, including steel, iron, wood, brick, sand, gravel, cement and concrete. Prerequisite: M. E. 333. Credit 2(0-4).

**347. Hydraulic Machinery.** A study of the theory, construction and operating characteristics of the principal types of hydraulic machinery. Lectures, recitation, problems. Credit 3(3-0).

**351, 352. Mechanical Engineering Laboratory.** The testing of steam and internal combustion engines and equipment, calibration of instruments. Advanced experimental study in the field in which the student is interested. Prerequisite: M. E. 343. Credit 3(0-6), 3(0-6).

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## MILITARY SCIENCE AND TACTICS RESERVE OFFICERS' TRAINING CORPS

### Section I—General

A Senior (CC) Civilian College type of unit, Reserve Officers' Training Corps is organized at this Institution under authority of Sections 40-47c National Defense Act as amended.

The mission of the Senior ROTC is to produce Junior Officers who have the qualities and attributes essential to their progressive and continued development as Officers in the Army of the United States, and to lay foundations for intelligent citizenship.

Two years of military science are required of all able bodied male students. Subject to conditions outlined in Section II. All Freshman and Sophomore students may be required by the College to participate in two years of military training which the Department of the Army will encourage and assist; but not necessarily as fully enrolled members of ROTC.

The Senior ROTC program will consist of two parts: (1) Basic course and (2) Advanced course which includes a 6 week summer camp period. (1) The Basic course will consist of formal instruction for a minimum of 3 hours per week for 2 academic years. (2) The Advanced course will consist of formal instruction for a minimum of 5 hours per week for 2 academic years.

### Section II—Conditions for Enrollment in ROTC

#### 1. General Conditions

- (1) Be a citizen of the United States and not less than 14 years of age.
- (2) Physically qualified under standards prescribed by Department of the Army.
- (3) Accepted by the University as a regularly enrolled student of Institution.
- (4) Successfully complete such general survey or screening test as may be prescribed.

**2. Conditions for Enrollment in Basic Course**

- (1) All general conditions listed in 1 above.
- (2) Not have reached 23 years of age at time of initial enrollment, except that an age limit of 25 will apply to veterans of World War II enrolling prior to 1 Jan. 1951.
- (3) Must have at least 2 academic years remaining in their course at this Institution.

**3. Conditions for Enrollment in the Advanced Course**

- (1) All general conditions listed in 1 above.
- (2) Not have reached 27 years of age at time of initial enrollment.
- (3) Be selected by the Professor of Military Science & Tactics and the President of the Institution.
- (4) Have completed the basic course Senior ROTC, or received credit in lieu thereof on basis of prior service in the Armed Forces.
- (5) Execute a written agreement with the Government, (Contract), to complete course of instruction, attend a 6 weeks period of summer camp, and to accept a commission if offered. The contract will expire if the student's attendance at school is interrupted for more than two calendar years.
- (6) Maintain satisfactory scholastic standing required by College in academic and ROTC work.

**SECTION III—MILITARY SCIENCE****COURSES OF INSTRUCTION**

Training in Military Leadership is emphasized with instruction being given in subjects common to All Branches.

**First Year Basic Course. M. S. 211, 212, 213.**

Military Organization; Military Policy of the U. S.; National Defense Act and ROTC; Evolution of Warfare; Maps and Aerial Photos; Military Psychology and Personnel Management; First Aid and Hygiene; Geographical Foundations of National Power; Military Problems of the United States; Military Mobilization and Demobilization; Leadership, Drill and Exercise of Command: 211 Fall; 212 Winter; 213 Spring. Credit 2(2-2) Each Quarter.

**Second Year Basic Course. M. S. 221, 222, 223.**

Military Organization; Weapons; Marksmanship; Technique of Fire of the Rifle Squad; Leadership, Drill and Exercise of Command. 221 Fall; 222 Winter; 223 Spring. Credit 2(2-2) Each Quarter.

**First Year Advanced Course. M. S. 231, 232, 233.**

Military Organization; Weapons; Gunnery; Communications; Combat Intelligence; Estimate of the Situation and Combat Orders; Field Fortifications; Tactics of the Rifle and Heavy Weapons Platoons and Companies; Leadership, Drill and Exercise of Command. 231 Fall; 232 Winter; 233 Spring. Credit 5(4-2) Each Quarter.

**Second Year Advanced Course. M. S. 241, 242, 243.**

Military Organization; Command and Staff; Communications; Motors and Transportation; Supply and Evacuation; Troop Movements; New Developments; The Military Team; Tactics—The Infantry Battalion in Attack and Defense; Military Administration and Personnel Management; Military Teaching Methods; Psychological Warfare; Leadership, Drill and Exercise of Command. 241 Fall; 242 Winter; 243 Spring. Credit 5 (4-2) Each Quarter.

The program and/or courses are subject to change by the Department of the Army directives.

**Section IV—Uniforms & Equipment**

All regularly enrolled members of this Senior ROTC are furnished by the Government free of cost, uniforms, equipment and text books. The student is responsible for the care, safeguarding, and cleaning of property issued to him. He is financially responsible for the loss, excessive wear, breakage due to carelessness or unauthorized use of clothing and equipment. Each student is required to have a certificate countersigned by his parents or guardian to insure that the Government is reimbursed in case the above regulations are violated. All ROTC property must be returned to the Military Property Custodian at end of School year or when a student withdraws from School.

**Credit for Previous Military Service or Training**

For previous honorable military service or training in Army, Navy, Marine Corps or Coast Guard of the U. S. credit may be allowed, subject to approval of President and the PMS&T, within the following limits:

(1) For 12 months or more service credit not to exceed the entire basic course of the Senior ROTC.

(2) For six months or more service credit not to exceed the first year of the basic course.

For additional information contact ROTC Headquarters located on the campus.

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**DEPARTMENT OF MUSIC**

Music is recognized as an important part of life. The principal and ultimate aim of our courses in music is directed toward the development of interest and a sincere desire to understand and appreciate more fully all types of music. The curriculum is designed to give the student a thorough training so that he will be prepared to teach music, to continue the study of music after the completion of these courses, and to be an influencing factor in the cultural development of his community.

**Suggested Outline of Courses for Majors and Minors in Band Music**

For regular freshman curriculum see page 59.

**Freshman Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Elementary Music Appreciation			
211, 212, 213 -----	2 (2-0)	2 (2-0)	2 (2-0)
Musicianship 214, 215, 216-----	2 (2-1)	2 (2-1)	2 (2-1)
Senior Band 240-1a, 240-1b, 240-1c-----	2 (0-5)	2 (0-5)	2 (0-5)
	<hr/> 6	<hr/> 6	<hr/> 6

Select thirteen hours from regular freshman curriculum. Page 62.

**Sophomore Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Advanced Music Appreciation 221, 222, 223--	2 (2-0)	2 (2-0)	2 (2-0)
Elementary Harmony 224, 225, 226-----	3 (3-0)	3 (3-0)	3 (3-0)
Senior Band 240-2a, 240-2b, 240-2c-----	2 (0-5)	2 (0-5)	2 (0-5)
	<hr/> 8	<hr/> 8	<hr/> 8

Select twelve hours from sophomore curriculum on page 62.

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Percussion Instruments 217 -----	2 (1-2)	-----	-----
Woodwind Instruments 218 -----	-----	2 (1-2)	-----
Brass Instruments 219 -----	-----	-----	2 (1-2)
Advanced Harmony 231, 232, 233-----	3 (3-0)	3 (3-0)	3 (3-0)
Public School Methods 234, 235, 236-----	3 (3-0)	3 (3-0)	3 (3-0)
Senior Band 240-3a, 240-3b, 240-3c-----	2 (0-5)	2 (0-5)	2 (0-5)
Electives -----	8 (8-0)	8 (8-0)	8 (8-0)
	<hr/> 18	<hr/> 18	<hr/> 18

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Elementary Conducting 237 -----	3 (1-4)	-----	-----
History of Music 241, 242, 243-----	3 (3-0)	3 (3-0)	3 (3-0)
Band Technics 244a, 244b, 244c-----	2 (1-2)	2 (1-2)	2 (1-2)
Band Arranging 247a, 247b, 247c-----	2 (2-0)	2 (2-0)	2 (2-0)
Senior Band 240-4a, 240-4b, 240-4c-----	2 (0-5)	2 (0-5)	2 (0-5)
Voice 246 -----	-----	-----	5 (2-3)
Electives -----	6 (6-0)	8 (8-0)	5 (5-0)
	<hr/> 18	<hr/> 17	<hr/> 19

This outline of courses should be worked in with the required courses for all students in the School of Education and Science. All students should remember that most courses in Music are in sequence, and each sequence should be started in the Fall quarter. Minors in the field of Band Music may omit the following courses: History of Music 241, 242, 243; Advanced Harmony 231, 232, 233; Elementary Conducting 237; and Voice 246. It should be especially noted that all majors and minors



in Band Music will be required to play in one of the bands throughout the four years.

A course in instrumental music designed to prepare students to organize and train high school bands is available to qualified persons. Those interested should apply to the band director and be prepared to take a preliminary examination upon entering.

All persons interested in either a major or minor in Band Music are encouraged to take piano lessons for at least the first two years. The monthly fee is listed under EXPENSES AND FEES.

### COURSES OF INSTRUCTION

Six hours of Music Appreciation or Art Appreciation are required for graduation in the School of Education and Science. These must be taken in the freshman year.

#### Music Appreciation

- 211. Elementary Music Appreciation.** This course aims to provide a general cultural background for the listener and includes a study of the instruments of the modern symphony orchestra. Credit 2(2-0).
- 212. Elementary Music Appreciation.** A number of musical terms and the lives of a number of the earlier musicians are studied. Phonograph records are used to illustrate musical examples. Credit 2(2-0).
- 213. Elementary Music Appreciation.** This course is a continuation of a study of terms and musicians. It includes a survey of the characteristics of the music of the Seventeenth Century. Credit 2(2-0).
- 221. Advanced Music Appreciation.** Music of the Eighteenth Century is carefully studied and examined. Credit 2(2-0).
- 222. Advanced Music Appreciation.** Music of the Nineteenth Century is carefully studied and examined. Credit 2(2-0).
- 223. Advanced Music Appreciation.** Music of the Twentieth Century is carefully studied and examined. Credit 2(2-0).

#### Theory

- 214. Musicianship.** This course includes a study of the system of notation, all major and minor keys, scales, intervals, and triads. Credit 2(2-1).
- 215. Musicianship.** This is a continuation of 214, and work is begun in ear training and sight-singing. Credit 2(2-1).
- 216. Musicianship.** This is a continuation of 215 with more advanced work being given in ear training, sight-singing, and terminology. Credit 2(2-1).

#### Harmony

- 224. Elementary Harmony.** This course includes a review of all major and minor scales, intervals, triads, and their inversions, in addition to advanced work at the keyboard, and exercises in ear training and dictation. Credit 3(3-0).

- 225. Elementary Harmony.** This course includes the study of inversions of primary and secondary chords, sevenths, and simple modulations. Credit 3(3-0).
- 226. Elementary Harmony.** This is a continuation of 225, introducing elements of composition as well as providing advanced work in ear training and dictation. Credit 3(3-0).
- 231. Advanced Harmony.** This is a continuation of 226 and includes a study of modulations, chromatic alterations, ornaments, keyboard, ear training, and dictation. Credit 3(3-0).
- 232. Advanced Harmony.** This is a continuation of 231. Harmonic and formal analyses are started in addition to intensive practice in keyboard, ear training, and dictation. Credit 3(3-0).
- 233. Advanced Harmony.** This is a continuation of 232. Exercises in part-writing are regularly assigned. Credit 3(3-0).

### Music Education

- 234. Public School Methods.** This course deals with the materials and methods for teaching in the primary grades with special attention given to the care and testing of the adolescent voice. Credit 3(3-0).
- 235. Public School Methods.** This course deals with the materials and methods for teaching in the grammar grades with special attention given to the teaching of music theory in these grades. Credit 3(3-0).
- 236. Public School Methods.** This course deals with the materials and methods for teaching in the junior high and high school. Credit 3(3-0).

### Conducting

- 237. Elementary Conducting.** This course includes the study of the technique of the baton and the study of the different forms for the purpose of conducting. Some time is devoted to the problems of score-reading. An opportunity is given for practical experience in conducting both vocal and instrumental groups. Credit 3(1-4).

### History

- 241. History of Music.** This course is a survey of music from the Fourth Century to the Sixteenth Century. Credit 3(3-0).
- 242. History of Music.** This course is a survey of music from the Sixteenth Century to the Eighteenth Century. Credit 3(3-0).
- 243. History of Music.** This course is a survey of music from the Eighteenth Century to the present day. Credit 3(3-0).

### Vocal Music

- 246. Voice.** This course includes a study of the proper fundamentals in breathing, diction, and voice production. Three hours of the total credit of five hours for this course come from at least two years of satisfactory service in the College Choral Society. Credit 5(2-3).

**Band Music**

- 210abc. Beginners' Band.** This band is primary for any student who desires to learn to play an instrument or for minors in Band Music who desire to change instruments after entering college. Credit 1(0-5) each quarter.
- 217. Percussion Instruments.** The percussion instruments are studied, and the proper methods for teaching these instruments are carefully analyzed. Credit 2(1-2).
- 218. Woodwind Instruments.** The woodwind instruments are studied, and the proper methods for teaching these instruments are carefully analyzed. Credit 2(1-2).
- 219. Brass Instruments.** The brass instruments are studied, and the proper methods for teaching these instruments are carefully analyzed. Credit 2(1-2).
- 220abc. Intermediate Band.** This band is primarily for those students who have passed Music 210abc, or who have had less than three years of instrumental experience, or who have been advised to join by the Band Director. Credit 1(0-5) each quarter.
- 240-1abc. Senior Band.** This band is primarily for students planning to major or minor in Band Music and is open to qualified freshmen who have had at least two years of previous training in a band instrument. This is the College Concert and Marching Band, and regular attendance is required at all rehearsals and public performances. Credit 2(0-5) each quarter.
- 240-2abc. Senior Band.** This band is for qualified sophomores. Credit 2(0-5) each quarter.
- 240-3abc. Senior Band.** This band is for qualified juniors. Credit 2(0-5) each quarter.
- 240-4abc. Senior Band.** This band is for qualified seniors. Credit 2(0-5) each quarter.
- 244a. Band Technics.** The student learns about school band organization and administration. Credit 2(1-2).
- 244b. Band Technics.** The student has an opportunity to do practical work in the teaching of percussion, woodwind, and brass instruments under the guidance of the Band Director. Credit 2(1-2).
- 244c. Band Technics.** The student is given an opportunity to work with the college band and ensemble groups. Some time may be spent working with outside organizations for practical experience. Credit 2(1-2).
- 247a. Band Arranging.** This course includes a practical study of all instruments and the art of writing for small combinations of instruments. Credit 2(2-0).

**247b. Band Arranging.** This is a continuation of 247a. The student writes for combinations of instruments although sectional writing is stressed. Credit 2(2-0).

**247c. Band Arranging.** The student learns to score for full band. As a class project one composition will be scored for full band. Credit 2(2-0).

### DEPARTMENT OF PHYSICAL EDUCATION

The general physical education program aims to promote the health, physical and mental efficiency of each student enrolled in the college and to provide carry-over interests and activities for all. A Health examination is given to each new student before he matriculates so as to determine his needs in physical education.

Unless officially excused by the college physician two class periods each week are required of all students. Juniors and seniors are permitted to elect their activity classes if all of the health, posture, and credit requirements have been met.

Students must be prepared, upon matriculation, to place their orders for the activity uniforms, the approximate cost for which is \$9.00 for men and \$8.00 for women.

### INTRAMURALS

A program of intramural activities is conducted, on an elective basis, for all students. Schedules and tournaments are arranged, and equipment is made available by the physical education majors.

### VARSITY ATHLETICS

The intercollegiate athletic program is under the supervision and direction of the Athletic Committee, consisting of faculty, alumni and students. The student members are appointed to the committee by the college president, on the basis of merit and achievement. The sports included in the program are: football, basketball, baseball, track, boxing and tennis. The college is a member of the Colored Intercollegiate Athletic Association and is subject to the rules and regulations of that body.

The Varsity letter shall be awarded by the Athletics Committee, upon recommendation of the coaching staff, to members of the football and basketball teams who have participated in a minimum of one-half of the total number of periods played in intercollegiate competition. In baseball, participation in one-half of the total number of innings played is required with the exception of: for pitchers who must have participated in at least one-fourth of the total number of innings played in intercollegiate competition. In the remaining sports, the award is made to the athlete who participates through the season with credit, with a provision that: to members of the track team who win two points in the conference or inter-sectional meets; to members of the tennis team who have won at least two matches in the conference tournament; and, to members of the boxing team who have won at least two matches in the conference tournament. The Varsity letter is awarded to members of the cheering squad who serve with credit.

**GENERAL ACTIVITY PHYSICAL EDUCATION COURSES**

The general courses in physical education, based upon the physical examination given at the beginning of the year, are required of all Freshmen and Sophomore men and women. A wide variety of athletic sports and games is provided to meet the needs and interests of the student and to acquaint him with many activities in the field of physical education. Special attention is given toward developing skills and an understanding of rules.

**Courses for Women****Freshmen**

**210a. Soccer and Speedball.** Fall. Credit 1(0-2).

**210b. Basketball.** Winter. Credit 1(0-2).

**210c. Softball and Volleyball.** Spring. Credit 1(0-2).

**213. Personal Hygiene.** (Required of all Freshmen.) A consideration is given to personal and mental hygiene with a view to establishing within the student a basis for positive health and efficiency through the development of desirable health habits, knowledge and attitudes. Credit 1(0-2).

**215a,b,c. Individual Physical Education Activities.** (Fall, Winter, Spring.) Special activities designed for those women whose examinations show that they are unable to participate in the regular physical education classes. Credit 1(0-2).

**Sophomores**

**220a. Hockey.** Fall. Credit 1(0-2).

**220b. Stunts and Tumbling.** Winter. Credit 1(0-2).

**220c. Tennis and Archery.** Spring. Credit 1(0-2).

**216a,b,c.** A continuation of the course 215a,b, and c. (Fall, Winter, Spring). Credit 1(0-2).

**Electives**

**211t. Tap Dancing.** Credit 1(0-2).

**212f. Folk Dancing.** Credit 1(0-2).

**217a. The Modern Dance.** (For Beginners.) Credit 1(0-2).

**217b. The Modern Dance.** (For Intermediates.) Credit 1(0-2).

**317c. The Modern Dance.** (For Advanced Students.) Credit 1(0-2).

**219. Aquatics.** Credit 1(0-2).

**Courses for Men****Freshmen**

**210a. Speedball.** Fall. Credit 1(0-2).

**210b. Stunts and Tumbling.** Winter. Credit 1(0-2).



**210c. Volleyball, Track and Field.** Spring. Credit 1(0-2).

**213. Personal Hygiene.** (Required of all Freshmen.) Credit 1(1-0).

**215a,b,c. Individual Physical Education Activities.** (Fall, Winter, Spring.)  
Special activities designed for those men whose examinations show that they are unable to participate in the regular physical education classes.  
Credit 1(0-2).

### Sophomores

**220a. Touch Football.** Fall. Credit 1(0-2).

**220b. Basketball and Advanced Tumbling.** Winter. Credit 1(0-2).

**220c. Softball and Badminton.** Spring. Credit 1(0-2).

**216a,b,c.** A continuation of the course 215a,b,c. (Fall, Winter, Spring).  
Credit 1(0-2).

### Electives

**213t. Tennis and Archery.** Credit 1(0-2).

**219. Aquatics.** Credit 1(0-2).

**226a. Boxing.** Credit 1(0-2).

## REQUIREMENTS FOR A MINOR IN PHYSICAL EDUCATION

### Theory Courses

Principles of Physical Education, 231	3	hours
The Teaching of Physical Education, 243	5	hours
The Teaching of Health Education, 244	3	hours
Administration of Health and Physical Education, 249	5	hours

### Activity and Coaching Courses

Individual Sports, 213is	1	hour
Rhythmics, 214	1	hour
The Modern Dance, 217 (Women)	1	hour
Basketball, Stunts and Tumbling, 218	1	hour
Swimming, Baseball, Track and Field, 219a	1	hour
Coaching of Football, 225 (Men)	2	hours
Coaching of Softball and Volleyball, 225a (Women)	2	hours
Coaching of Basketball, 225b	2	hours
Coaching of Track, 225d (Men)	2	hours
Coaching of Baseball, 225e (Men)	2	hours
Group Games, Volleyball and Football or Soccer, 226	1	hour
Combatives, Running Activities and Class Formation, 229a, (Men)	1	hour

Unless indicated otherwise, all courses will be taken by men and women.

## MAJOR CURRICULUM IN PHYSICAL EDUCATION

The professional curriculum in physical education is designed to prepare students to become teachers of health and physical education, and athletics coaches. The physical education teacher is generally expected to teach other courses. It is, therefore, recommended that the student, upon counsel of his advisor, pursue courses leading to a second major or double minor.

## MAJOR IN PHYSICAL EDUCATION

## Freshman Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English 211, 212, 213-----	5 (5-0)	5 (5-0)	5 (5-0)
Math. 311, 312 -----	5 (5-0)	5 (5-0)	-----
History 211 or 212-----	-----	-----	5 (5-0)
Vocations -----	3 (0-6)	3 (0-6)	3 (0-6)
Art 314, 315, 316-----	2 (2-0)	2 (2-0)	2 (2-0)
or			
Music 211, 212, 213-----	1 (0-2)	1 (0-2)	1 (0-2)
Education 211 -----	1 (0-2)	-----	-----
Military Science 211, 212, 213-----	2 (3-2)	2 (3-2)	2 (3-2)
Physical Edu. 210a, 210b, 210c-----	1 (0-2)	1 (0-2)	1 (0-2)
Physical Education 213 -----	1 (1-0)	-----	-----

## Sophomore Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
English -----	-----	-----	5 (5-0)
Chemistry 111, 112 -----	5 (3-4)	5 (3-4)	-----
Botany 111 -----	5 (3-4)	5 (3-4)	5 (3-4)
Zoology, 111 -----	-----	5 (3-4)	5 (3-4)
History 213, 221 or 222-----	5 (5-0)	-----	5 (5-0)
Physical Edu. 226 -----	1 (0-5)	-----	-----
Physical Edu. 218 -----	-----	1 (0-5)	-----
Physical Edu. 219a-----	-----	-----	1 (0-5)
Military Science 221, 222, 233-----	2 (3-2)	2 (3-2)	2 (3-2)

## Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Principles of Physical Education 231-----	3 (3-0)	-----	-----
Coaching of Football (Men) 225-----	2 (2-1)	-----	-----
Coaching of Speedball & Soccer (Women) 225 ss -----	2 (2-1)	-----	-----
Educational Psychology 231 -----	5 (5-0)	-----	-----
Sociology 231 (Principles) -----	5 (5-0)	-----	-----
Personal and Community Hygiene 234-----	5 (5-0)	-----	-----
Physical Edu. 217 (Women)-----	1 (0-5)	-----	-----
Physical Edu. 229a (Men)-----	1 (0-5)	-----	-----
Human Anatomy 221 -----	-----	5 (3-4)	-----
Principles of Health Education 236-----	-----	3 (3-0)	-----
The Teaching of Physical Education 243-----	-----	5 (3-4)	-----
Coaching of Basketball 225b-----	-----	2 (2-1)	-----

Physical Edu. 214	-----	-----	1 (0-5)	-----
Physiology 241	-----	-----		5 (5-0)
Intramural Activities 254	-----	-----		3 (3-0)
Coaching of Baseball (Men) 225e	-----	-----		2 (2-1)
History of Physical Edu. 245	-----	-----		3 (3-0)
Physical Edu. 213is	-----	-----		1 (0-5)

### Senior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Administration of Health & Physical Edu. 249	-----	-----	5 (5-0)
Community Recreation 232	3 (3-0)	-----	-----
Economics 231	5 (5-0)	-----	-----
Education 237	3 (3-0)	-----	-----
Education Philosophy 224	3 (3-0)	-----	-----
Education 236 (Test & Measurements)	-----	3 (3-0)	-----
Individual Physical Education 223	-----	3 (3-0)	-----
Research 246	-----	3 (3-0)	-----
The Teaching of Health 244	-----	3 (3-0)	-----
First Aid 238	-----	2 (2-0)	-----
Coaching of Track (Men) 225d.	-----	-----	2 (2-1)
Coaching of Softball & Volleyball (Women) 225a	-----	-----	2 (2-1)
Theory of the Dance (Women) 253	-----	-----	3 (3-0)
Practice Teaching 251	-----	-----	5 (1-8)

### COURSES FOR MAJOR AND MINOR STUDENTS

The activity courses listed below are designed for major and minor students. Instruction is given in methods of teaching activities in elementary and secondary schools, and the correlation of physical education activities with other school subjects. Special attention is given to the organization of demonstrations, pageants, and playground activities.

**212f. Folk Dancing.** Characteristic dances of many countries, including Sweden, Hungary, Austria, Spain, France, Holland, the United States and others. Credit 1(0-2).

**213is. Individual Sports.** (Men and women). Technical study is made of such activities as shuffleboard, handball, ping-pong, badminton, croquet, archery, and tennis. Credit 1(0-5).

**214. Rhythmics.** (Men and women). Activities included are clog, tap and folk dancing. Credit 1(0-5).  
See above.

**217a. The Modern Dance.** For beginners (women). Credit 1(0-2).

**217b. The Modern Dance.** For intermediates (women). Credit 1(0-2).

**217c. The Modern Dance.** For advanced students (women). Credit 1(0-2).

**217. The Modern Dance.** (Women). A concentrated course in the Modern Dance which is required of all women physical education major and minor students. Credit 1(0-5).

- 218. Basketball, Stunts and Tumbling.** (Men and Women). Two different sections. This course is designed to familiarize the student with the techniques of basketball, stunts and tumbling. Credit 1(0-5). See above.
- 219a. Swimming, Baseball, Track and Field.** (Men and women). Two different sections. This course is designed to give the student a playing knowledge of basketball, track and field, and to learn the fundamentals of swimming well enough to be able to pass the American National Red Cross test for the beginners or the standard certificates. Credit 1(0-5).
- 221. Human Anatomy.** (Men and women). A brief study is made of the human body as it relates to students of physical education. Credit 5(3-4).
- 223. Individual Physical Education.** (Men and women). A study is made of methods of examining and determining needs of the handicapped; activities suitable for individuals with abnormal body conditions, and the conduct of a program of restricted activities to meet their needs. Prerequisite: Human Anatomy. Credit 3(3-0).
- 225. The Coaching of Football.** (Men). A study is made of the history of the sport, of rules, skills, psychology of coaching, of handling players, methods of organizing practices, strategy, team offenses and defenses, and of various modern formations and systems of play. Credit 2(1-2).
- 225a. The Coaching of Softball and Volleyball.** (Women). Credit 2(1-2).
- 225b. The Coaching of Basketball.** (Men and women). Two different sections offered. Credit 2(1-2).
- 225c. Tennis.** (Men and women). Credit 1(0-2).
- 225d. The Coaching of Track.** (Men). Credit 2(2-1).
- 225e. The Coaching of Baseball.** (Men). Credit 2(2-1).
- 225ss. The Coaching of Speedball and Soccer.** (Women). Credit 2(2-1).
- 226. Group Games.** (Men and women). A study is made of a large variety of games of low organization of the circle, group, and line type, which might be suitable for use on the playground, in the gymnasium, or at camp, and for adult clubs or gatherings. A concentrated study is also made of the techniques of volleyball and football for men, and volleyball and soccer for women. Credit 1(0-5).
- 226a. Boxing.** (Men). Credit 1(0-2).
- 227. Practice and Procedures in Physical Education.** (Men and women). Winter. Credit 3(2-2).
- 228. Practice and Procedures in Health Education.** (Men and women). Spring. Credit 3(2-2).
- 229a. Combatives, Running Activities, and Class Formations.** (Men). Required of all physical education major and minor students. Credit 1(0-5).

- 231. Principles of Physical Education.** (Men and women). A critical study of the scientific basis for physical education with applications of the aims and objectives to the modern concepts of education. Prerequisites: Ten hours of biological studies and junior standing. Credit 3(3-0).
- 232. Community Recreation.** (Men and women). A study is made of city, state, and national organizations. Practice is given in the general principles and techniques in the organization and promotion of leisure activities for home, school and community. Credit 3(3-0).
- 232a. Nature and Function of Play.** (Men and women). A brief study of the history and theories of play and play as a function of enriched living. Credit 2(2-0).
- 234. Personal and Community Hygiene.** (Men and women). This course aims to establish within the individual a basis for positive health and effective living through a consideration of those factors which effect his personal and health efficiency. Consideration is also given to the field of public health as it affects the community, with special emphasis being placed on ways in which the individual and community agencies may improve and maintain group health. Credit 5(5-0).
- 236. Principles of Health Education.** (Men and women). A study is made of principles for the teaching of health education in elementary and high schools. A close correlation with physical education and other subjects is outlined and encouraged. Prerequisite: Personal and Community Hygiene. Credit 3(3-0).
- 338. First Aid.** (Men and women). A study of techniques of first aid to the injured in the home, school, and community. Emphasis is placed upon the practice of safety measures. The standard certificate of the American National Red Cross is issued upon successful completion of the course. Credit 2(1-2).
- 241. Physiology.** (Men and women). A course in elementary physiology, covering the muscular, cardiorespiratory, nervous, gastro-intestinal and reproductive systems. Credit 5(5-0).
- 243. The Teaching of Physical Education.** (Men and women). Two different sections. This course points out the best procedures in acquiring desired outcomes in physical education. Practice is given to planning, organizing and supervising physical education class activities. Prerequisites: Principles and an adequate number of other courses in physical education. Credit 5(3-4).
- 244. The Teaching of Health Education.** (Men and women). In this course consideration is given to the methods, materials and procedures for the teaching of health in the elementary and high schools. Prerequisites: Principles of Health Education and Personal Hygiene. Credit 3(3-0).



- 245. History of Physical Education.** (Men and women). A study of the evolution of physical education from the earliest times down to the present day. It considers the relation of physical education to education and to National life and ideals as it takes up the different historical periods. Credit 3(3-0).
- 249. Administration of Health and Physical Education.** (Men and women). A study of philosophy and policies in the administration of a health and physical education program, including the classification of students, the staff, teaching load, time schedule, finance, the gymnasium, locker rooms, equipment, and inter-scholastic athletics. Prerequisites: Principles, and an adequate number of other physical education courses. Spring. Credit 5(5-0).
- 252. Athletic Officiating.** (Men and women). Two different sections. Credit 1(0-2).
- 253. Theory of the Dance.** The purpose of this course is to develop in the student an understanding of the constructive value of the dance. Spring. Credit 3(2-2).
- 254. Intramural Activities.** (Men and women). A study of the organization and administration of intramural activities, including lectures, papers, and discussions of finance, equipment, time, schedules and policies. Credit 3(3-0).

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## DEPARTMENT OF PHYSICS

The work of the Department of Physics is directed toward the following ends: (1) the training of students of the Sciences for future graduate work; (2) the training of teachers of Physics and the Physical Sciences for Secondary schools; (3) the training of pre-engineering and pre-medical students for later professional work; and (4) the training of the general student in scientific methods of work and in the understanding of the place of physical science in the modern world. Students who are interested in these opportunities should begin the study of physics as early as possible. Three courses in the Calculus should be taken in the Sophomore year to provide a good background for major work in the physical sciences and engineering.

### Major in Physics

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 331, Electricity and Magnetism-----	-----	-----	5(5-0)
M. E. 331, 332 -----	5(5-0)	5(5-0)	-----
Physics 332 -----	-----	5(5-0)	-----
Physics 351, 352 Physical Mathematics-----	5(5-0)	5(5-0)	-----
Math. 331. Differential Equations-----	-----	-----	5(5-0)
Electives -----	8( )	3( )	8( )
	18	18	18

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 334, 335. Electrical Measurements.			
Same as E. E. 334, 335-----	-----	5 (3-4)	-----
Physics 333 Electronics-----	-----	5 (3-4)	-----
Physics 505 Modern Physics-----	-----	-----	5 (5-0)
Physics 506 Vector Analysis-----	5 (5-0)	-----	-----
Physics 507, 508 Electrodynamics-----	-----	5 (5-0)	5 (5-0)
Electives-----	13 ( )	3 ( )	8 ( )
	<hr/> 18	<hr/> 18	<hr/> 18

**Engineering Physics****Freshman Year**

See First Year's Curriculum of Mechanic Arts, page 59.

**Sophomore Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Mathematics 321, 322, 323-----	5 (5-0)	5 (5-0)	5 (5-0)
Physics 321, 322, 323-----	5 (3-4)	5 (3-4)	5 (3-4)
Social Sciences-----	5 (5-0)	5 (5-0)	3 (3-0)
Machine Shop Practice 328, 329-----	2 (0-4)	2 (0-4)	-----
Mechanism M. E. 321-----	-----	-----	4 (3-2)
Military Science 221, 222, 223-----	2 (2-2)	2 (2-2)	2 (2-2)
	<hr/> 19 Hrs.	<hr/> 19 Hrs.	<hr/> 19 Hrs.

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Mathematics 331, 501-----	-----	5 (5-0)	5 (5-0)
Physics 334, 335, 351-----	3 (1-4)	3 (1-4)	5 (5-0)
Chemistry 141, 142-----	6 (3-6)	6 (3-6)	-----
Physics 331-----	-----	-----	5 (5-0)
Physics 505-----	-----	-----	5 (5-0)
Electives-----	10 Hrs.	5 Hrs.	-----
	<hr/> 19 Hrs.	<hr/> 19 Hrs.	<hr/> 20 Hrs.

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Physics 336, 332, 333-----	5 (5-0)	5 (5-0)	5 (5-0)
Physics 352-----	5 (5-0)	-----	-----
Electives-----	8 Hrs.	13 Hrs.	13 Hrs.
	<hr/> 18 Hrs.	<hr/> 18 Hrs.	<hr/> 18 Hrs.

**Suggested Electives:**

Economics 231, 232  
 Pol. Sc. 231  
 History 213, 221  
 Education 231

Math. 318  
 M. E. 331, 332  
 Physics 353, 507, 508

## Courses in Physics

- 311. Physics Survey.** The scientific method, the nature of motion and rest of bodies, heat and temperature. For non-science majors. 5(4-2).
- 312. Physics Survey.** Atomic and molecular phenomena. Wave motion. Sound. For non-science majors. 5(4-2).
- 313. Physics Survey.** Relations between matter and electricity. The nature of light. For non-science majors. 5(4-2).
- 314. Household Physics.** Special emphasis is given to the applications of mechanics, heat, and electrical principles to the modern household. Credit 5(4-2). Formerly Physics 311.
- 321. General Physics.** Introduction to the fundamental principles of mechanics and heat. Liberal use of mathematics including beginning calculus. Prerequisites: Math. 311, 312, 313. Calculus should be taken concurrently. 5(3-4).
- 322. General Physics.** Introduction to the fundamental principles of wave motion, sound, and light. Prerequisites: Physics 321, Math. 321. 5(3-4).
- 323. General Physics.** Introduction to the fundamental principles of electricity and magnetism. Prerequisites: Math. 322, Physics 322. 5(3-4).
- 331. Electricity and Magnetism.** A presentation of the theory of direct current and alternating current electricity, including topics in magnetism and electricity. Prerequisite: 332. Credit 5(5-0).
- 332. Thermodynamics.** The first, second, and third laws of thermodynamics; Carnot cycle and heat engines; thermodynamic properties of gases, liquids, and solids. Prerequisites: Physics 323, Math. 331 concurrently. Credit 5(5-0).
- 333. Electron Physics.** A study of cathode rays, charge and mass of the electron, photoelectricity, radioactivity, thermionic emission, radiation and ionization potentials. Prerequisite: Physics 331. Credit 5(5-0).
- 334. Electrical Measurements.** Same as E. E. 334. Prerequisite: Physics 323. Credit 3(1-4).
- 335. Electrical Measurements.** Same as E. E. 335. Prerequisite: Physics 334. Credit 3(1-4).
- 336. Electrical Measurements.** Same as E. E. 336.
- 337. Vibration and Sound.** Production, propagation, transmission and reception of sound. Applications to acoustics, mechanics, and electrical problems. Prerequisites: Physics 323, Math. 322. Credit 5(4-2).
- 351. Physical Mathematics.** Probability, statistics, graphical methods, least squares, empirical equations. Prerequisite: Math. 322. Credit 5(5-0).

- 352. Physical Mathematics.** Complex numbers, series, functions of a complex variable, applications to wave motion. Prerequisites: Math. 322, Physics 323. Credit 5(5-0).
- 353. Theoretical Mechanics.** Dynamics of particles and of rigid bodies. Prerequisites: Physics 321, Math. 322. Credit 5(5-0).

### Graduates and Advanced Undergraduates

- 501. Meteorology** A study of weather maps and polar front analysis is included together with a discussion of the principles underlying weather forecasting causes of weather changes. Credit 5(5-0).
- 502. Heat.** Methods of temperature measurements, specific heats, thermal expansion in solids, in liquids and in gases, conduction, radiation, kinetic theory of gases, change of state, low and high temperature measurements. Prerequisite: Physics 323. Credit 5(2-6).
- 503. Physical and Geometric Optics.** A study of the physical properties of light, velocity, wave properties, color, optical instruments. Prerequisite: Physics 323. Credit 5(2-6).
- 505. Modern Physics.** A course dealing with the significant advances of physics since 1900. Includes atomic structure, elementary quantum theory. Prerequisite: Physics 333. Credit 5(5-0).
- 506. Vector Analysis.** Same as Math. 501. Prerequisite: Math. 323. Credit 5(5-0).
- 507. Electrodynamics.** Mathematical theory of electromagnetic fields. Prerequisites: Differential Equations, Physics 331, Math. 323. 5(5-0).
- 508. Electrodynamics.** Maxwell's equations, general theorems of electrodynamics, electromagnetic waves. Prerequisites: Physics 507, Math. 323. 5(5-0).
- 555. History of Physics.** Historical development of the scientific method. The social and political implications of science and technology. Open to advanced students of all departments. 5(5-0).

### RELIGION AND ETHICS

It is the aim of these courses to enable students to believe wisely and to act well through an understanding of their religious and moral heritages.

- 231. Introduction to Old Testament.** A survey of the history and literature of the Old Testament with special emphasis upon the growth of the idea of God and its effect upon social and political life. Fall. Credit 3(3-0).
- 232. Introduction to New Testament.** History and literature of the New Testament. Emphasis is upon the teachings of Jesus and the history of the early church. Winter. Credit 3(3-0).
- 233. Christian Ethics.** An interpretation of the Christian consciousness of life and the application of Christian principles toward the solution of personal and social problems. Spring. Credit 3(3-0).

- 241. Psychology of Religion.** The nature of religious life and its individual and social effects. The Psychological processes involved in worship, prayer, faith, conversion and mystical experience. Fall. Credit 3 (3-0).
- 242. Philosophy of Religion.** An examination of religion in its relations to the whole life of man. Emphasis upon religious values, conceptions of God, ways of knowing God, problem of belief in God, good and evil, prayer, sin and suffering, and immortality. Winter. Credit 3 (3-0).
- 243. The Church in Contemporary Society.** A brief survey of the historical development of the Christian church with emphasis upon the role of the church in contemporary affairs. Spring. Credit 3 (3-0).

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### RESEARCH

- 246. Senior Research.** An introduction to methods of gathering, recording, and interpreting information. Open only to seniors in the School of Education and Sciences. Each student will either complete a long paper, which in certain cases will constitute a thesis, or contribute to the completion of a project requiring the work of two or more students. Given each quarter. Credit 3 (3-0).

For graduate research in specific fields, see Index to Graduate Courses, page 64.

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### DEPARTMENT OF SOCIAL SCIENCES

A minimum of 15 quarter hours of history is required for graduation in the School of Education and Sciences, in Fine Arts and Home Economics. Majors in this department are required to pass a comprehensive examination in the field of social science at the end of the Winter Quarter of their senior year.

The offerings of this department are grouped under three major headings, (1) Social Studies; (2) Applied Sociology and (3) Labor and Industrial Relations.

Freshmen and sophomores will find course suggestions and requirements on page 59.

### MAJOR IN SOCIAL STUDIES

This major is designed especially for persons planning to teach.

#### Junior Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Ancient and Medieval History,			
Hist. 231, 232 -----	-----	5 (5-0)	5 (5-0)
Economics, Ec. 231, 232 -----	5 (5-0)	5 (5-0)	-----
Money and Banking, Ec. 233			
or			
Labor Problems, Ec. 234 -----	-----	-----	5 (5-0)
Sociology 231, 232, 242 -----	5 (5-0)	5 (5-0)	3 (3-0)
Minor or Electives -----	8 ( )	3 (3-0)	5 (5-0)



**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Principles of Geography, Geo. 240_____	-----	5 (5-0)	-----
Commercial Geography, Geo. 241_____	-----	-----	5 (5-0)
Latin American History, Hist. 233_____	-----	-----	3 (3-0)
Federal Government, Pol. Sc. 231_____	5 (5-0)	-----	-----
State Government, Pol. Sc. 232_____	-----	5 (5-0)	-----
Minor or Electives _____	10 ( )	5 ( )	5 ( )

**MAJOR IN APPLIED SOCIOLOGY**

This major is suggested for those who are planning to become workers or administrators in some form of social work or community service.

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Ec. 231, 232, 234_____	5 (5-0)	5 (5-0)	5 (5-0)
Soc. 231, 232, 233_____	5 (5-0)	5 (5-0)	5 (5-0)
Soc. 501, 502, 235_____	3 (3-0)	3 (3-0)	3 (3-0)
Pol. Sc. 231 or 232_____	5 (5-0)	-----	-----

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Pol. Sc. 231 or 232_____	5 (5-0)	-----	-----
Soc. 241, 242 _____	-----	3 (3-0)	3 (3-0)
Ec. 254, 501, 502_____	4 (2-4)	3 (3-0)	3 (3-0)
Ec. 235, 236, 245_____	3 (3-0)	3 (3-0)	2 (2-0)
Electives _____	5 ( )	10 ( )	10 ( )

**MAJOR IN LABOR AND INDUSTRIAL RELATIONS**

This major is suggested for those persons looking forward to employment as personnel advisers, among labor groups, in employment service or in the federal government service.

**Junior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Ec. 231, 232, 234_____	5 (5-0)	5 (5-0)	5 (5-0)
Soc. 231, 232 _____	5 (5-0)	5 (5-0)	-----
Ed. 341, 331, 535_____	3 (3-0)	3 (3-0)	3 (3-0)
B. A. 335, 353 _____	5 (5-0)	-----	5 (5-0)

**Senior Year**

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
Pol. Sc. 231, 232_____	5 (5-0)	5 (5-0)	-----
Soc. 242, 243 _____	-----	3 (3-0)	3 (3-0)
Soc. 501, 502 _____	3 (3-0)	3 (3-0)	-----
Ec. 254, 501, 502_____	4 (2-4)	3 (3-0)	3 (3-0)
Soc. 503, Ed. 342_____	3 (1-4)	3 (3-0)	-----
Electives—Psychology, Accounting, Public Speaking.			

## COURSES IN HISTORY

- 210. Survey of Civilization.** A general course outlining the main trends in the history of Western civilization and showing the development of Ancient civilizations and the subsequent expansion in Medieval and Modern Europe. Open to Freshmen only. Any quarter. Credit 5(5-0).
- 211. Modern Europe.** A survey course dealing with major factors and movements in the history of Modern Europe. It deals with economic, social, political, religious, and intellectual problems in their relationship to the development of national states, growth of democracy and the expansion of Europe from 1500 to 1815. Lectures, collateral reading, special reports and map work. Fall and Spring. Credit 5(5-0) each.
- 212. Modern Europe.** A survey of the history and development of Europe from 1815 to the present. Credit 5(5-0).
- 213. History of the Negro.** This course begins with a brief survey of the African background of the Negro and traces him from Africa to America. It includes a study of his enslavement, with special emphasis on slavery in America, the Free Negro before 1860, abolition, and the Civil War with special emphasis on the part played by Negro troops, achievements since 1865, and forces in Negro progress. Winter or Spring. Credit 5(5-0).
- 221. American History.** This course includes a survey of English history at the time the colonies were founded, and the economic, social, and political development of the colonies and of the United States until 1865. Credit 5(5-0).
- 222. United States History.** An intensive study of the political, social, and economic history of the United States from 1865 to the first World War. Credit 5(5-0).
- 223. History of Reconstruction.** An intensive study of the social, political and economic conditions of the United States during the years 1865 to 1895. Prerequisite: 15 hours of history. Winter. Credit 3(3-0).
- 226. History of England.** A survey of the social and political development of England in the 16th, 17th, and 18th centuries. Credit 5(5-0).
- 231. Ancient History.** This course is designed for those majoring in the field or who plan to teach history in secondary schools. It includes a study of the civilization and contributions of the people of the Orient, along the Nile, and of Greece and Rome. Prerequisite: 15 hours of history. Fall. Credit 5(5-0).
- 232. Mediaeval History.** A history of Europe in the middle ages with particular attention to social and economic conditions and cultural and religious development. Prerequisite: 15 hours of history. Winter. Credit 5(5-0).
- 233. History of Latin America.** A study of the rise and development of the Latin-American nations, with special attention to their relations with each other and with the outside world. Prerequisite: 15 hours of history or consent of instructor. Spring. Credit 3(3-0).

- 234. Contemporary American History.** Analysis of important problems in American history since the World War, with emphasis on the domestic and foreign policies. Any quarter. Credit 3(3-0).
- 235. History of Eastern Europe.** A general course in the history of Eastern Europe, the Balkans and Russia from the coming of the Romanoffs to the present. Credit 3(3-0).
- 245. Research Problem.** Open only to seniors majoring in the field. Any quarter. Credit 3(0-6).

### COURSES IN POLITICAL SCIENCE

- \*231. Federal Government.** A general introductory course in the government of the United States designed to acquaint the student with the more important facts of the organization and working of Federal institutions and to give a foundation for more advanced work in government. Discussed are principles of political science, the state, the nation, the government, constitution, the federal executive, cabinet, and courts. Prerequisite: 15 hours of Soc. Science or consent of instructor. Fall. Credit 5(5-0).
- 232. State and Local Governments.** A study of state constitutions and of the structure and functions of state and local government in the United States. Prerequisite: 15 hours of Soc. Science or consent of instructor. Winter. Credit 5(5-0).

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### GEOGRAPHY

- 240. Principles of Geography.** This course is a survey of the principles of geography. The earth, air, sea, and land studied with particular emphasis upon the physiographic features of North America. Credit 5(5-0).
- 241. Economic Geography.** This course deals with natural environment and natural resources in relation to the various economic areas of the world with particular emphasis on the development of the United States. This is followed by a regional approach in relation to economic activities. Credit 5(5-0).
- 242. Resources and Industries of U. S.** A study of the Physical Resources of the U. S. and its possessions with emphasis on the utilization and conservation of power, labor, minerals and soils. Credit 3(3-0).
- 243. Economic Geography of Latin America.** This course deals with the agricultural and industrial resources of Latin America with special emphasis on such countries as Brazil, Argentina, Mexico and Cuba, the utilization of Negro labor, and the assimilation of African Culture into Latin-American life. Credit 3(3-0).

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\* Offered in alternate years. Not offered in 1949-50.

**COURSES IN SOCIOLOGY**

(See also Rural Sociology, page 79)

- 231. Principles of Sociology.** A general survey of the field of sociology as a social science. Particular emphasis will be laid on social institutions, social organization, conditions and problems. Fall. Credit 5(5-0).
- 232. Social Problems.** A review of social problems resulting from maladjustments such as dependency, disorganization, industrial unrest, juvenile and adult delinquency, crimes that stand in the way of social well-being. Emphasis on current programs for social planning and reform. Prerequisite: Soc. 231 or consent of instructor. Credit 5(5-0).
- 233. Rural Home Life.** A survey of the home life of Negroes, living on farms and in rural communities, including means and methods of improvement; field and observation tours will be a part of the course. Prerequisite: Soc. 231 or consent of instructor. Spring. Credit 5(3-4).
- So. 234. Criminology and Juvenile Delinquency.** Crime from the point of view of personality and social situations and a study of techniques for improvement of delinquents. Credit 3(2-2).
- 235. Marriage and Family.** Social interactions, with objective study of factors that indicate successful marriage and parenthood. Credit 3(3-0).
- 241. The Family.** A survey of the family organization from primitive times to the present, and the analysis of the factors that enter into family development. Prerequisite: Soc. 231 or consent of instructor. Fall. Credit 3(3-0).
- 242. Race Relations.** A study of local conditions, situations, attitudes and progress of the various races in the United States, and methods of dealing with interracial problems. Prerequisite: Soc. 231 or consent of instructor. Winter. Credit 3(3-0).
- 243. Public Relations.** Methods and policies of establishing and maintaining friendly relationships with newspapers and other community enterprises. Such topics will be reviewed as editorials, propaganda, advertisements, public opinion and sources and evaluation of news. Credit 3(3-0).

**Graduates and Advanced Undergraduates**

- 501. Leadership.** Survey and critical analysis of qualities and factors essential for good leaders in American life. Prerequisite: Sociology 232. Credit 3(3-0).
- 502. Current Economic and Social Problems.** A practical course in applied economics and sociology dealing with analysis of present trends in government, economics, industry, agriculture, and the social implications of these trends. Current problems of everyday life are emphasized. Prerequisite: 15 hours of social science. Credit 3(3-0).
- 503. Research Problems.** Individual problems for research in each student's field of interest—labor, industry, agriculture, unemployment, old age, etc. Prerequisite: 15 hours of social science. Credit 3(1-4).

**505. History of Social Theory.** A brief review of the contributions of social theorists beginning with Plato, with consideration given to the social situations and historical events that gave rise and substance to their writings. Open to majors in any of the social sciences. This course co-ordinates Sociology with Philosophy, History, Economics, Psychology and other related fields. Spring. Credit 3(3-0).

### COURSES IN ECONOMICS

**231. Principles of Economics.** This course surveys the general field of Economics. It considers the nature and scope of Economics, important economic institutions, and economic characteristics of present society. Credit 5(5-0).

**232. Economic Problems.** This course is concerned with the important economic problems found in our productive and consumptive processes, commerce, market prices, variations and adjustments in business, form of business organization, labor, capital, banking, public ownership, and other related topics. Prerequisite: Ec. 231 or consent of instructor. Winter. Credit 5(5-0).

**233. Money and Banking.** This course includes a general survey of the field of money, banking, and credit, monetary standards, inflation, deflation, international trade and purchasing power, and recent federal monetary policy. Prerequisite: Ec. 231 or consent of instructor. Spring. Credit 5(5-0).

**234. Labor Problems.** General introductory course, dealing with such labor problems as unemployment, wages, hours of labor, women in industry, child labor, industrial accidents, occupational diseases, industrial unrest, labor organizations, Negro labor, labor in national defense, and employers associations, with examination of proposed solutions. Spring. Credit 5(5-0).

**235. Labor History.** This course is concerned with the background and the history of labor in the United States, the interplay of indentured service, slavery and free labor; The growth and development of industrial society and industrial problems; Development of industrial labor organizations. Prerequisite: Ec. 231. Credit 3(3-0).

**236. Economics of Consumption.** This course includes a consideration of items which make up the budget of the family or the individual, such as food, clothing, home ownership, rent, taxes, insurance, savings and investments, standards of living, techniques of budgeting, simple accounting and buymanship. Special attention is given to consumer problems for Negroes. Prerequisite: Ec. 231.

**254. Elements of Statistical Method.** A course intended to acquaint students with the elementary principles of statistics, the source and collection of data, the nature of statistical units, the properties and appropriate use of averages, methods of comparison. The tabular and graphic presentation of statistical information necessary to the formulation and execution of business and economic problems will be had through use of appropriate data. Fall. Credit 4(2-4).



- 245. Seminar in Economics.** An intensive study of significant Labor and Industrial Problems and Literature. Lectures, demonstrations, and discussion open only to Majors and Minors in the field of Social Science. Credit 2(2-0).

**For Undergraduates and Graduates**

- 501. Recent Labor Legislation.** Problems of labor from standpoint of the state, conciliation and arbitration, legal minimum wage, social insurance, and woman and child labor. Credit 3(3-0).
- 502. Social Security Legislation and Administration.** The need for and development of social security legislation in Europe and in America, particularly unemployment insurance, old age benefits, and public assistance programs, scope and probable extension, functions of federal, state and local organizations; administrative and social problems encountered. Credit 3(3-0).



## **VOCATIONAL SCHOOL**

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### **I. Trades and Industries**

**A. Auto-Mechanics**

**C. Carpentry**

**C.M. Cabinet Making and Upholstering**

**S.R. Shoe Repairing**

**T. Tailoring**

**Sec. Sc. Secretarial Science**

**M. Masonry**

**Pl. Plumbing**

**W. Welding**

### **II. Short Course**

**A. Agriculture**

**Dress Making and Garment Construction**

## VOCATIONAL COURSES

### AUTO MECHANICS

**Training Objectives:** This is a carefully organized course designed to prepare those young men and women inclined to be skilled mechanics. The practical side of the course has been so emphasized that upon the completion of the trade students will be qualified to become owners or managers of an auto service business as well as skilled mechanics in this field. A diploma will be awarded to those students satisfactorily completing the course.

**Length of Course:** Three years of nine months each depending upon the student's experience and ability.

**Amount of time required in shop:** Twenty hours per week, thirty-six weeks per year.

### CURRICULUM

Auto Mech. 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Math. 335, 336, or 311, 312	6 Hrs.
Eng. 211, 212, 213	15 Hrs.
M. Sc.	12 Hrs.
or	
Physical Ed.	6 Hrs.
M. Shop M. E. 328, 329, 330	6 Hrs.
Welding 311, 312, 313	9 Hrs.
Carpentry 311, 312	6 Hrs.
Elec. Wiring I. A. 326	3 Hrs.
B. Adm.	10 Hrs.
Economics	10 Hrs.

### Suggested Electives

Ec. 231, 232, 234.

B. A. 332, 333, 337, 339, 346, 351, 355.

### COURSES

**411. Benchwork.** A study will be made and laboratory work given in thread cutting with dies and taps, clipping, filing, drilling, sharpening and use of small tools.

**412. Maintenance and Service.** Lecture on the principle of operation of maintenance of all chassis parts. Laboratory work will be on the disassembly and reassembly of transmission, rear ends, universal joints, shock absorbers, and braking systems.

**413. Power Plant.** Lecture, demonstration and laboratory work will be undertaken on the principle of the four-cycle engine, fuel and cooling systems.

**421. Power Plant.** General shop practice is designed to give a student experience in general overhaul of engine including adjusting of bearings, grinding valves, and installing rings.

**NOTE:** All large equipment and special tools are furnished by the College but the student is expected to furnish a set of small tools and protective clothing.

- 422. Power Plant.** Instruction will be given on use of the boring bar, connecting rod aligners, use of cylinder hone, reonuers, and fitting of pistons.
- 423. Electrical System.** The fundamental principles of the electrical system, including magnetism, generators, starters, voltage and current regulators, automatic chalves, ignition wiring and batteries will be studied.
- 431. Body Work.** Lecture and demonstration on the use and care of body tools, along with laboratory is designed to give a student skill in body work.
- 432. Painting.** This course is designed to give the student experience and knowledge of spraying of various enamels and lacquers.
- 433.** A study will be made of problems pertaining to shop methods, estimating, and trouble shooting.

## MASONRY

**Training Objectives:** The objective of the program is to develop in the student skills and knowledge in masonry that he may successfully use in practical construction.

**Length of Course:** Three years of nine months each depending upon student's experience and ability.

**Amount of Time in Shop:** At least twenty hours per week, thirty-six weeks each year.

## CURRICULUM

Masonry 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	6 Hrs.
M. Sc.	12 Hrs.
or	
Phy. Ed.	6 Hrs.
Mech. Drawing, M. E. 311, 312	6 Hrs.
Carp. 311, 312	6 Hrs.
Mat. Equip. and Shop Management I. A. 347	3 Hrs.
Cont. and Specifications M. E. 327	3 Hrs.
B. Adm.	10 Hrs.
Mat. of Construction I. A. 324	3 Hrs.
Electives	5 Hrs.

## Suggested Electives

Art 311, 312.  
 Econ. 231, 234.  
 Math. 315.  
 Voc. Drawing I. A. 331, 332, 333.



**COURSES****First Year**

- 412. Bricklaying.** Construction of arches and walls of different piers and pillows, common bond walls, and structural bonds. Credit 10 (0-20).
- 412. Bricklaying.** Construction of arches and walls of different bonds. Common bond, 90° corners, Flemish and English bond corners. Sills for doors and windows, setting of frames and flue construction. Credit 10 (0-20).
- 413. Bricklaying.** Construction of buildings, blueprint reading and scaffold construction. Credit 10 (0-20).

**Second Year**

- 421. Tile and Stone Construction.** Hollow tile walls, hollow brick and stone piers, pilasters with battered sides and structural bond. Credit 10 (0-20).
- 422. Tile and Stone Construction.** Construction of segmental arches, semi-circular, and flat arches. Credit 10 (0-20).
- 423. Tile and Stone Construction.** Laying off buildings. Pattern bond walls, mantels and chimney construction of brick or stone, irregular corners and fireplaces.

**Third Year**

- 431. Plastering and Cement Work.** Study and use of tools, putting up laths, first coat and plaster work. Credit 10 (0-20).
- 432. Plastering and Cement Work.** Concrete mixing, outside construction of walks and piers. Finish plaster coats, paving. Credit 10 (0-20).
- 433. Plastering and Concrete Work.** Over plaster construction, cement to walk construction, laying of foundation and piers. Credit 10 (0-20).

**SHOE REPAIRING AND LEATHER WORK**

**Training Objectives:** To give the student a practical knowledge of the subject matter as well as the necessary training in the related subjects to permit both the operation and maintenance of a shoe repairing and leather work shop, and as skilled workers in the trade.

**Length of the Course:** Two years of nine months each.

**Time in Shop:** A minimum of 20 hours per week for 36 weeks each year.

**CURRICULUM**

Shoe Repair 411, 412, 413, 421, 422, 423-----	60 Hrs.
Math. 335, 336 -----	6 Hrs.
Eng. 211, 212, 213-----	15 Hrs.
M. Sc. or Phy. Ed. -----	6 Hrs.
B. Adm. -----	10 Hrs.
Electives -----	10 Hrs.

### Suggested Electives

B. A. 337, 346, 351, 332, 333, 335.

Ec. 231, 234.

Art 317, 318.

M. Shop 328, 329.

Elec. Wiring I. A. 326.

Sec. Sc. 317, 318.

### COURSES

**411-SR. Threads and Hand Tools.** The study of threads, breaking threads, making waxed ends and twisting bristles on ends. Making various stitches used in hand sewing. The names, care and use of hand tools, sharpening knives and other hand tools.

**412-SR. Construction.** The methods of fastening the parts of shoes together. The construction of shoes is then studied to enable one to make the proper repairs. Tempering and preparing leather for soles. Cutting off old soles, skiving shanks and preparing shoes for half soles and heels.

**413-SR. Processing.** Inks, waxes, dyes, cement and nails are studied. Cutting sole leather to save. Fitting soles and heels for nailing. Putting lifts on wood heels. Inking, burnishing and finishing shoes on power machines. The care, operation and use of the patching machine is studied. Special attention is given to rip sewing and neat upper patching.

**421-SR. Bench Work.** All students having satisfactorily completed their first-year course in shoe-repairing will begin their second-year course in shoe-repairing with a brief review of the first year's work. Fitting half soles and heels on men's welted shoes. Putting top lifts and half soles on women's welted shoes. Putting new bottoms on men's and women's shoes. Care and use of the buffer and burnishing wheels of finishing machines. Sewing of welts and cutting of inner soles.

**422-SR. Machine Operation.** Attaching wood heels on women's shoes. Study and operation of the sole cementing process. Care and operation of the edge trimmer and setter. Sharpening edge cutters. Manipulation and care of the power stitcher. Stitching soles on curved and straight needle stitchers.

**423-SR. Finishing and Shop Management.** Problems pertaining to high-class repair work. Changing suede shoes to glazed finish. Dyeing shoes pastel shades and the reglazed process of changing colors. Problems and methods of buying materials. The operation and business methods of the modern commercial shop.

## CARPENTRY

**Training Objectives:** This course aims to develop in the student the knowledge and skills necessary for practical work in carpentry. Related technical knowledge, English, mathematics and drafting are also included.

**Length of Course:** Three years of nine months each.

**Amount of Time in the Shop Per Year:** Twenty hours per week for thirty-six weeks.

## CURRICULUM

Carpentry 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	6 Hrs.
M. Sc. or Phy. Ed.	6 Hrs.
Mech. Drawing 311, 312	6 Hrs.
B. Adm.	10 Hrs.
Elec. Wiring I. A. 326	3 Hrs.
Math. of Construction I. A. 324	3 Hrs.
Welding 311, 312	6 Hrs.
M. Shop 328, 329	4 Hrs.
Electives	5 Hrs.

### Suggested Electives

B. A. 346, 351, 337.

Math. 315.

Voc. Drawing I. A. 331, 332.

## COURSES

### First Year

**411. Benchwork.** This course consists of the study and practice of the fundamental operations in woodworking. Emphasis is placed upon the care and use of the most common woodworking tools.

**412. Benchwork.** Projects involving the various types of joints used by the carpenter are selected. Also the proper care and use of carpentry tools is stressed.

**413. Building Repair.** A certain amount of repair work is required. Only such repair work is selected as will give the student a fundamental understanding and appreciation of the principles of building construction.

### Second Year

**421. House Framing.** Intensive study will be made of the framing square and its special uses to the carpenter. Methods of placing sills, type of girders, placing and bracing studs will be studied.

**422. House Framing.** Practical work in door and window framing will be given. The various types of roofs will be constructed in miniature. Application of the steel square to roof construction will be emphasized.

**423. House Framing.** This course involves study of western or platform construction, balloon and braced frame construction, the making and placing of door and window frames, covering floors, insulating materials, inferior trim, selecting and installing hardware.

### Third Year

**431-C. Stair Building.** Jobs involving the laying out, cutting and placing of straight run stringers, platform flights, dog leg flights, treads, riser, newels, skirting boards, rails, balusters, and forms for concrete work.

**432-C. Roof Construction.** Jobs involving the cutting, placing and nailing of common, jack, valleyed hip rafters by the use of the steel square.

**433-C. Blueprint Reading and Estimating.** Principles of orthographic projection. Drawing of plans and details of buildings. Estimating quantities.

## CABINETMAKING AND UPHOLSTERING

**Training Objective:** To develop skilled workers in the manufacturing and repairing of furniture and cabinets. English, mathematics and drafting are required according to the needs of the students.

**Length of Course:** Three years of nine months each.

**Amount of Time in the Shop per Year:** Twenty hours per week for thirty-six weeks.

## CURRICULUM

Cabinetmaking 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	10 Hrs.
M. E. 311, 312	6 Hrs.
Materials of Construction I. A. 324	3 Hrs.
Vocational Drawing I. A. 331, 332, 333	9 Hrs.
Material Equipment and Shop Management I. A. 347	3 Hrs.
Contracts and Spec. M. E. 327	3 Hrs.
B. Adm.	10 Hrs.
Carpentry 311, 312	6 Hrs.
M. Sc. or Phys. Ed.	6 Hrs.

### First Year

**411. Care and Use of Tools.** This course includes studying all common woodworking tools, sharpening cutting tools—grinding and whetting plane bits and chisels, filing auger bits, and sharpening saws. Projects involving the fundamental principles of joinery are provided. Credit 10 (0-20).

**412. Elementary Joinery.** The student works on projects involving joinery with a view of gaining a high degree of dexterity. Square and circular table tops are built up with the use of glue. The work is performed mostly by hand. Credit 10 (0-20).

**413. Advanced Joinery.** Much practice is given the student in the construction of projects involving mortise and tenon joints and dovetail joints. Projects such as tables, stands, cabinets, and chests give the student an opportunity to make practical application of joinery and at the same time to gain useful skills. Credit 10 (0-20).

### Second Year

**421. Wood Turning.** Care and use of woodworking machinery. Construction of a few simple projects involving spindle turning. Emphasis is placed on gaining facility with the turning tools and in duplicating pieces. Credit 10 (0-20).

**422. Wood Turning.** Additional practice in spindle turning. Practice in face plate turning and in taper turning. Repairing broken table and chair legs so as to get experience in duplicating parts. Credit 10 (0-20).

**423. Wood Finishing.** Filling, staining, waxing, varnishing, and enameling; refinishing of furniture. Credit 10 (0-20).

### Third Year

**431. Upholstering.** Projects involving the various types of caning, seat weaving and upholstery without springs. Credit 10 (0-20).

**432. Upholstering.** Upholstering frame structures, springing up, methods of fastening webbing, stuffings, coverings; the use of gimp, nails, springs, hard-edge upholstery, and spring-edge upholstery. Credit 10 (0-20).

**433. Cabinetmaking and Upholstering.** The development of a comprehensive project involving cabinet work, finishing, and upholstery. This project should involve most of the fundamentals of cabinetmaking and upholstery. Credit 10 (0-20).

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## PLUMBING AND STEAMFITTING

**Objectives:** This course is designed to prepare skilled mechanics in the field of plumbing and steamfitting. In addition to courses listed, the department reserves the right to require trainees to spend at least one summer on grounds for practical work, unless they can furnish satisfactory evidence that they have had adequate practical experience in their trade.

**Length of Course:** Three years of nine months each depending upon the student's experience and ability.

**Amount of Time in Shops:** 20 hours a week, 36 weeks per year.

## CURRICULUM

Plumbing 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	6 Hrs.
M. Sc.	12 Hrs.



Phy. Ed. -----	6 Hrs.
M. E. 311, 312, 314 -----	9 Hrs.
M. Shop 328, 329 -----	4 Hrs.
Carp. 311, 312 -----	6 Hrs.
Welding 311, 312 -----	6 Hrs.
B. A. Electives -----	10 Hrs.

## COURSES

### First Year

- 411. Care and Use of Tools.** History of Plumbing: Duties and responsibilities of a plumber. Cutting, threading, reaming, and simple fittings. Study of plumbing material. Practical applications. Credit 10(0-20).
- 412. Drainage and Vent Pipe Installations.** Drainage pipe arrangements. Supports and connections between pipes. Applications, sewage disposal (field trips). Prerequisite Pl. 411. Credit 10(0-20).
- 413. Traps in Drainage Systems.** Installation of traps and branch connections. Minor repairs. Prerequisite Pl. 412. Credit 10(0-20).

### Second Year

- 421. Plumbing Laws and Regulation.** Wiping joint, soldering and lead work. Blueprint reading. Prerequisite: Pl. 413. Credit 10(0-20).
- 422. Water Supply.** Cold and hot water. Water treatment method and purification (field trips). Prerequisite Pl. 421. Credit 10(0-20).
- 423. Estimating and Installation.** This course consists of determining the cost of labor and materials for various installations. Prerequisite Pl. 422. Credit 10(0-20).

### Third Year

- 431. Steam and Hot Water.** The various heating systems. Tools and equipment used in steamfitting. Sheet metal work. Mechanical equipment of buildings. Prerequisite Pl. 423. Credit 10(0-20).
- 432. Welding and Brazing.** Acetylene and electric welding in pipe work. Prerequisite Pl. 431. Credit 10(0-20).
- 433. Copper Tubing and Fittings.** Study and use of copper fittings. Soldering and lead work. Applications. Prerequisite 432. Credit 10(0-20).

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## TAILORING

**Objectives:** This course in tailoring covers three years of thorough training in making new garments such as: trousers, vests, coats, and overcoats. The course also includes repairing, altering and pressing which prepares a student for commercial work.

**Length of Course:** Three years of nine months each depending upon the student's experience and ability.

**Amount of Time in the Shop:** A minimum of 20 hours per week for 36 weeks each year is required.

## CURRICULUM

Tailoring 411, 412, 413, 421, 422, 423, 431, 432, 433	90 Hrs.
Math. 335, 336	6 Hrs.
Eng. 211, 212, 213	15 Hrs.
M. Sc. or Phy. Ed.	6 Hrs.
Art 317, 318, 319	9 Hrs.
B. A.	10 Hrs.
Art 311, 312, 313	9 Hrs.
Electives	8 Hrs.
Hist. 213.	
Econ. 231, 234.	
Math. 315.	

## COURSES

## First Year

**411-T. Care and Use of Tools.** Care of shop and tools. Position on tailor's bench. Practice in use of needle, thimble, and the fundamental stitches which are essential to hand sewing. Students are required to make at least nine different stitches to be placed in a scrapbook for future reference. They are required to do various projects by hand and machine.

**412-T. Pocket Making.** Studying and classifying different types of pockets, such as piped pockets, side pockets, watch pockets and flap pockets. The top pockets, the half top pocket, and the quarter top are also studied in order to meet the demands of prevailing pocket style. Spacing and placing hip and side pockets.

**413-T. Trousers Constructing.** Joining and finishing uniform trousers, civilian trousers and overalls.

## Second Year

**421-T. Trousers Continued.** Review of previous work. The sizes and length of trousers to be studied. The correct method of sewing on buttons, felling certain linings, making hemmed and cuff bottoms; shaping and pressing.

**422-T. Vest Construction.** Studying the various styles and types of vest pockets. Studying materials. Correct method of making pockets, studying the different types of facing and fronts; making backs, making straps, padding and shaping fronts, adjusting edge stay tape, joining backs and fronts, spacing buttonholes, sewing on buttons.

**423-T. Working from Drafts.** Review Work. Cutting and making trousers and vests from draft, and block patterns, studying the styles of all garments previously made, comparing ancient and modern styles. The correct method of finishing past work in the proper manner to be practiced.

### Third Year

**431-T. Coats and Overcoats.** Review of previous work. Coat and overcoat making. Studying changes that affect work in citizen's garment making.

**432-T. Materials and Colors.** Work on ordinary citizen's garment continued. Studying grades of material, estimating cost and quality of materials: working from drafts. Drafting trousers. Study of harmony in colors, drapery in garments.

**433-T. Measuring, Drafting and Cutting.** Measuring, drafting and cutting the garment studied. Students are required to make a suit to show proficiency. Study of current trade trends during the year.

### WELDING

**Training Objectives:** This is a carefully organized course designed to prepare young men and women inclined to become skilled Electric Arc Welders. The practical side of the course has been so emphasized that upon completion of the trade, students will be qualified to become owners or managers in Electric Arc Welding business as well as skilled mechanics in industry.

**Length of Course:** Twelve months. The time, however, will depend upon the student's experience and ability to pass standard tests.

**Amount of Time in Shops:** Twenty hours per week for forty-eight weeks.

### CURRICULUM

Welding 411, 412, 413, 421	40 Hrs.
Eng. 211, 212, 213	15 Hrs.
Math. 335, 336	9 Hrs.
Materials of Construction I. A. 324	3 Hrs.
M. Shop M. E. 328	2 Hrs.
Mech. Drawing 311, 312	6 Hrs.

### COURSES

**411. Welding.** Electric arc welding. Care and operation of welding machines. A study of various welding rods and their uses. Current ratings for different kinds of welding. Practice in running beads and preparing work for welding. Credit 10(0-20).

**412. Welding.** Horizontal and vertical joints. Practice in laying continuous beads with different types of rods. Practice in welding butt and lap joints. Credit 10(0-20).

**413. Welding.** Vertical and Overhead joints. Practice in laying vertical and overhead beads. Intensive practice in selection of right type of rod for material used. Practice to prepare students to pass the American Welders Society Guide Bend Test. Credit 10(0-20).

- 421. Welding.** Oxy-Acetylene welding practice on various joints in all positions. Care and adjusting of equipment. Cutting and brazing on light and heavy work. Welding and brazing of different types of metals. Credit 10(0-20).
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### ELECTIVE VOCATIONAL COURSES

These courses are designed for those students pursuing the regular college courses, and yet desiring some training in vocational fields. The students are given thorough drilling and are required to attain a knowledge of the subject matter. The courses are offered on the college level and regular college credit is allowed.

- 311. Auto Mechanics.** Construction and operation of power system. Fuel and cooling system. Lubrication, washing and polishing. Repair of tires. Credit 3(0-6).
- 312. Auto Mechanics.** Study of ignition system, wiring and lighting system, batteries and their care, starter and generators. Credit 3(0-6).
- 313. Auto Mechanics.** Minor repairs to safety devices. Brake adjustments. Credit 3(0-6).
- 311. Cabinet Making.** Care and use of hand tools, wood turning, pattern making, or work to suit individual interest. Credit 3(0-6).
- 312. Cabinet Making.** Care and use of power tools. Built-in cabinet. Small projects as desk, bookcase or useful projects for the home. Credit 3(0-6).
- 313. Cabinet Making.** Inside trim. Varieties and characteristics of timber used in projects. Applying hardware, application of stain, varnish, shellac and enamel. Credit 3(0-6).
- 314. Cabinet Making.** General building and repair work in furniture and cabinet construction. Prerequisite I. A. 323. Credit 3(0-6).
- 311. Carpentry.** Study and use of hand tools. Types of joints used in construction. General framing and bracing. Credit 3(0-6).
- 312. Carpentry.** Blueprint reading and estimating of quantities. General construction of small projects of roof covering. Credit 3(0-6).
- 313. Carpentry.** Stair building. General roof construction. Flooring. Experience on practical building. Credit 3(0-6).
- 314. Carpentry.** General building and repair work in carpentry. Prerequisite: I. A. 323 or the equivalent. Credit 3(0-6).
- 328, 329, 330. Machine Shop Practice.** See write-up under Mechanical Engineering. Credit 2(0-4). Each quarter.
- 311, 312, 314. Mechanical Drawing.** See write-up under Mechanical Engineering courses. Credit 3(0-6).
- 311. Masonry.** Types of brick and their use in construction. Mortar mixing, thickness of joints, tools and practice work. Credit 3(0-6).

- 312. Masonry.** Study of mortars, bonds, joints, pointing up. Practice work. Credit 3 (0-6).
- 313. Masonry.** Estimating, arches, lintels, chimneys and fireplaces. Practical jobs. Credit 3 (0-6).
- 311. Plumbing.** Care and use of tools: History of plumbing: Duties and responsibilities of a plumber. Cutting, threading, reaming, and simple fittings. Study of plumbing material. Credit 3 (0-6).
- 312. Plumbing.** Drainage and vent pipe installation: Drainage pipe arrangements. Supports and connections between pipes. Sewage disposal. Prerequisite Pl. 411. Credit 3 (0-6).
- 313. Plumbing.** Installation of traps and branch connections. Minor repairs. Prerequisite Pl. 412. Credit 3 (0-6).
- 311. Radio.** This course consists of Ohm's and Kirchoff's Laws, study of radio symbols and schematic diagrams, voltmeters, ohmmeters, current and voltage measurements, radio principles, continuity checks, and fundamental shop techniques.
- 312. Radio.** This is a continuation of 311 with emphasis on the function of capacitors and inductors in A.C. and D.C. circuits, diagram studies of the superheterodyne receiver.
- 313. Radio.** Vacuum tube characteristics, Piezo-electric effect, phonograph pickups and amplifiers, vibrator power supplies, and servicing of automobile receivers.
- 311. Shoe Repairing.** The study of threads, making waxed ends and twisting bristles on ends. Stitches used in hand sewing. Care and use of hand tools for leather work. Credit 3 (0-6).
- 312. Shoe Repairing.** Construction. Methods of fastening parts of shoes together. Tempering and preparing leather for soles. Preparing shoes for half soles and heels. Ink, dyes, cement and nails are studied. Bench work. Credit 3 (0-6).
- 313. Shoe Repairing.** Machine operation. Care and use of power stitcher. Cement process. Sewing of welts and cutting. Curved and straight needle stitchers. Finishing. Changing of color. Credit 3 (0-6).
- 317, 318, 319. Secretarial Science.** See typewriting under Secretarial Science.
- 311. Tailoring.** Care and use of tools. Practice in use of needle and thimble. Study and application of stitcher to different stitches. Credit 3 (0-6).
- 312. Tailoring.** Study and classification of materials. Practice in making pockets, buttonholes and backstitching. Machine sewing. Credit 3 (0-6).
- 313. Tailoring.** Material and colors. Matching for color. Relining of coat and pockets. Pressing. Credit 3 (0-6).



**311. Welding.** Oxy-Acetylene Welding. The purpose of this course is to give students a knowledge and understanding of the welding process and its possibilities. A knowledge of the limitation of the process, of the apparatus used, of the common metals, their composition, their properties and methods of identification. Practice work. Credit 3(0-6).

**312. Welding.** Continuation of 311 with practice in more difficult welds. Credit 3(0-6).

**313. Welding.** Electric Arc Welding. A study of the different types of metals and welding rods to be used with steel, cast iron, malleable iron and more common metal. Skill in handling the welding machine as applied to practical jobs. Credit 3(0-6).

### CERTIFICATE IN DRESSMAKING AND GARMENT CONSTRUCTION

A dressmaking and garment construction course requiring the completion of two years work or approximately 85 quarter hours for a certificate.

The course consists of dressmaking and garment construction, related courses and other courses which will enable one to engage in the dress-making business.

#### First Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
D.M. 411a, 411b, 411c-----	5(1-8)	5(1-8)	5(1-8)
D.M. 123a, 419a, 415b-----	3(2-2)	3(1-4)	3(1-4)
Art 311-----	3(0-6)	-----	-----
Eng. 211, 212-----	5(5-0)	5(5-0)	-----
P. Ed. 210 a,b,c-----	1(0-2)	1(0-2)	1(0-2)
D.M. 415a-----	-----	3(1-4)	-----
D.M. 417-----	-----	2(1-2)	-----
Clo. 124-----	3(1-4)	-----	-----
D.M. 413, 419b-----	3(1-4)	3(1-4)	-----
Ed. 211-----	1(1-0)	-----	-----

#### Second Year

	<i>Fall</i>	<i>Winter</i>	<i>Spring</i>
D.M. 421a, 421b-----	2(1-2)	2(1-2)	-----
D.M. 419c-----	3(1-4)	-----	-----
D.M. 423, 427-----	-----	3(3-0)	3(3-0)
Clo. 121-----	3(1-4)	-----	-----
Electives			
P. Ed. 213-----	1(0-2)	-----	-----
P. Ed.-----	-----	1(0-2)	-----
Electives-----	-----	-----	10
D.M. 422, 425-----	-----	5(0-10)	5(0-10)

## Suggested Electives:

Typing  
Art Appreciation  
Shop Work  
Family Relationship  
Consumer Problems  
Home Economics Orientation

## DESCRIPTION OF COURSES

**D.M. 411a, 411b, 411c. Clothing Construction.** Fundamental process in clothing construction and sewing techniques are considered and used in the construction of daytime and sports clothing. The use of commercial patterns are used. Machine attachments are used. Sewing techniques are emphasized. Credit 5(1-8) each.

**123. Textiles.** See general catalogue.

**811. Freehand Drawing.** See catalogue.

**211. English Composition.** See catalogue.

**211. Physical Education.** See catalogue.

**D.M. 419a, 419b, 419c. Drafting and Draping.** Basic principles and rules for drafting foundation patterns and draping are studied and applied to skirts, dresses, blouses, and underclothing. Design in relation to structural lines is emphasized and accuracy of line-development, correct size and style are considered. These patterns may be used in clothing 412b and 412c. Credit 3(1-4) each.

**D.M. 413. Children's Clothing.** The course deals with patterns, selection and construction of suitable clothing for children. Credit 3(1-4).

**D.M. 415a-415b. Costume Designing.** Dress designing is developed through sketching, coloring and through draping. Enough historic costume is studied to note development of dresses from early times to present. Designing of costume is applied to various types of dresses. Individual note books are made and used as a background for further study. Details and accessories are considered. Credit 3(1-4) each.

**Clothing. 123—Crafts—**See general catalogue.

**D.M. 417. Personal Appearance.** A study is made of each student's figure and its relation to normal standard size. Consideration is given to diet, posture, walking, good grooming and other habits which constitute the making of an attractive figure. Coloring and types are analyzed and clothing selection made to bring all the most desirable characteristics of the individual student, and the different income level group. Credit 2(1-2).

**D.M. 422. Clothing Reclamation.** Practical experience in altering, re-making, redyeing and reclaiming clothing. Credit 5(0-10).

- D.M. 421a, 421b. Tailoring.** Problems in tailoring are presented in constructing coat and dress or skirt and blouse. Technique in finishing, lining and pressing are practiced. Credit 2(1-2) each.
- D.M. 423. Economics of Clothing.** The course includes a study of production, marketing institutions and the functions they perform. Factors governing consumer choices and ethics are studied. Study of problems include trends toward standardization, cooperatives, chain store growth, grading of garments and government regulations. Credit 3(3-0).
- D.M. 425. Clothing Construction.** An application of the techniques learned in construction and designing classes. Credit 5(0-10).
- D.M. 427. Shop Management.** The course considers ethics in business method, advertising and how to meet the public.
- 432. Upholstering.** See general catalogue.  
See catalogue for suggested electives, page 172.

## HONORS AND AWARDS, 1948

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1. William H. Foushee Memorial Scholarship Cup—Presented each year to the member junior with the highest scholastic average in Science.  
Winner—Leonard J. Simon, High Point, N. C.
2. Kappa Phi Kappa Debating Key—Awarded annually to the member of the graduating class having credit for two years of debating on the varsity team.  
Winner—Randolph Blackwell, Wilkesboro, N. C.
3. Rand-Hawkins-McRae Debating Trophy—Awarded to the member of the graduating class having three years credit of debating on the varsity team.  
Winner—Loreno Y. Mebane, Pantego, N. C.
4. Agricultural Association Awards—To the member of the junior class having the best all-around record in some phase of agriculture or Home Economics.  
Winners—Martha Birden, Sevierville, Tennessee—Home Economics; Robert Lee Monroe, Clarkton, N. C.
5. Saslows, Inc. Medals—Awarded annually (1) to the member of the senior class graduating with the highest record in the School of Education and Science and (2) to the member of the graduating class with the highest record in the Social Sciences.  
Winner—Edward D. Clark, Chadbourn, N. C.
6. M. F. Spaulding Medal—To the member of the graduating class with the best four-year record in the school of Agriculture.  
Winner—Harold Hutcherson, Oxford, N. C.
7. John Merrick Medal—Awarded to the member of the graduating class with the best four-year record in the school of Mechanic Arts.  
Winner—Travis Lee Banks, Greenville, N. C.
8. Regal Jewelers Award—To the member of the graduating class with the highest four-year record in the business department; (2) to the member of the graduating class with the highest four-year record in Home Economics; (3) to the member of the graduating class with the highest four-year record in Science.  
Winners: Dorothy Lee W. McIver, Greensboro, N. C.—Business Department; Eugene Marrow, Henderson, N. C.—Science; Lelia V. White, Greensboro, N. C.—Home Economics.
9. Athletic Award—Granted to the student making the best record in the field of athletics.  
Winner—William Pryor, Pittsburgh, Pa.
10. Register Keys—Granted to the members of the graduating class who have rendered two years of meritorious service as members of the staff of the Register.

Winners—Dorothy B. Simmons, Greensboro, N. C.; Benjamin Harris, Rougemont, N. C.; Myrtis Edgcombe, West Palm Beach, Fla.; Idell Jones, Simms, N. C.; Joseph C. Paige, Siler City, N. C.; Thelma Bowers Sandifer, Greensboro, N. C.; Eremnise Smith, New York, N. Y.

11. Gate City Alumni Award—Made possible by the Greensboro chapter of the Alumni Association to the member of the graduating class who has rendered the most distinctive and constructive service in interpreting the ideals of the college to the community.

Winner—Loreno Yolande Mebane, Pantego, N. C.

12. Choral Society Keys—Awarded to the members of the graduating class who have rendered four years of meritorious service as members of the society.

Winners—Reginald L. Ashford, Kinston, N. C.; Thomas B. Jones, Irma, S. C.; Dorothy L. Martin, Warsaw, N. C.; Charles L. Morrison, Thomasville, N. C.; Doris L. Murphy, Kinston, N. C.; Lois J. Samuels, Winston-Salem, N. C.; Hilda G. Stanford, Kinston, N. C.; Charles S. Whitted, High Point, N. C.

13. Phi Omega Chapter, Alpha Kappa Alpha Sorority Scholarship Award of \$50.00.

Winner—Lois Samuels, Winston-Salem, N. C.

14. Pan-Hellenic Council Scholarship—A scholarship of \$50.00 made available by the Pan-Hellenic Council of the college to the student maintaining the highest average in scholarship and deportment for the current year.

Winner—Vernon Mobley, Greensboro, N. C.

15. N. I. D. A. Award—Provided by the college chapter of the National Intercollegiate Dramatic Association to the members of the graduating class who for a period of two years as members of the Richard B. Harrison Players have performed successfully in leading roles in major college plays.

Winners—Frank W. Dulin, Advance, N. C.; Wilbur Eggleston, Jr., Elizabeth City, N. C.; Sophia V. Holley, Elizabeth City, N. C.; Ruth E. Holmes, Lexington, N. C.; Joseph C. Paige, Siler City, N. C.; Rubye E. Troxler, Greensboro, N. C.

16. Phi Beta Sigma Fraternity Scholarship Award of \$25.00 to the Junior with the highest average in business or Commercial Education.

Winner—Fleance Daughtry.

17. Regal Jewelers Medal for excellence in Radio.

Winner—Robert Lee Kinley, Florence, S. C.

18. Regal Jewelers Medal for excellence in Shoe Repairing.

Winner—Calvin F. Morrow, Greensboro, N. C.



19. Four Years' Meritorious Service in College Band.

Winners—Thomas Cooper, Jackson, N. C.; Ralph Jenkins, Murfreesboro, N. C.; Pauline E. McCollough, Charlotte, N. C.; Charles Morrison, Thomasville, N. C.; James Skelton, Greensboro, N. C.; Howard Robinson, Greensboro, N. C.; Cornelius Woods, Birmingham, Ala.; Bernard D. Barno, Florence, S. C.

20. Zeta Phi Beta Sorority Scholarship Award of \$50.00 given by the Beta Nu Chapter to the best all-round high school senior girl of Guilford County planning to enter college this Fall.

Winner—Doris Dean of Immanuel Lutheran College.

21. Alpha Phi Alpha Scholarship Award of \$50.00 to the non-veteran Sophomore with the best scholastic record.

Winner—Helena E. Carney, Greensboro, N. C.

22. Richard B. Harrison Players College Keys.

Winners—Wilbur Eggleston, Jr., Elizabeth City, N. C.; Lonnie Foster, Weleetha, Okla.; Sampson Foster, Greenville, Miss.; Frank W. Dulin, Advance, N. C.; Joseph C. Paige, Siler City, N. C.; Eddie Griffin, Greensboro, N. C.; Sophia V. Holley, Elizabeth City, N. C.; Ruth E. Holmes, Lexington, N. C.; Rubye E. Troxler, Greensboro, N. C.

23. A. and T. College Choral Society's Award for Three Years Meritorious Service.

Winners—Alva C. Brown, West Palm Beach, Fla.; William H. Garland, Greensboro, N. C.; Versie C. Hillian, Hamlet, N. C.; Seth T. McCoy, Greensboro, N. C.; Gilbert G. Patterson, Baltimore, Md.; John A. Robinson, Newton, N. C.; Lelia V. White, Greensboro, N. C.

24. A. and T. College Choral Society Scholarship Award of \$50.00.

Winner—Seth T. McCoy, Greensboro, N. C.

25. Charles L. Cooper Award for Excellence in Industrial Arts.

Winner—George Carroll Gail, Baltimore, Md.

26. The Susie B. Dudley Scholarships of \$50.00 for graduate study in the summer of 1948 and \$100.00 for graduate study in academic year 1948 to 1949, respectively, presented by Mrs. L. J. Spaulding.

## TRADE CERTIFICATES 1948

Auto Mechanics—Alexander, Richard F., Jr.; Artis, Leroy; Brooks, Prince, Jr.; Browning, Zack A.; Canady, Louis E.; Cochran, Jack; Cole, Henry D.; Eubanks, Chester A.; Florence, John H.; Fowler, Eddie Lee; Fulton, Sidney B.; Johnson, Johnnie F.; McClain, James O.; Merritt, Earl F.; Mitchell, Chester; Palmer, Robert J.; Powers, James H.; Ross, Chester; Taylor, Earl M.; Tillman, William J.; Tyson, Samuel; William, Alex Donnel.

Dairy—Dorsett, Sears Edward.

Dress Making—Rogers, Lizzie Vivian.

Laundry Management and Dry Cleaning—Brown, Henderson.

Masonry—Eason, John A.; Moore, Albert H.; Staton, Aris S.; Walters, Dempsey.

Plumbing—Andrews, James Grant.

Radio Repairing—Felton, Joseph B.; Kinley, Robert Lee; Lewis, George T.; Parker, James Leroy.

Shoe Repairing—Carver, Mary Ella; Cheeseman, Connor; Fenner, Moses T.; Fisher, George C.; Gillislee, James K. T.; Gordon, James, Jr.; Green, Joseph L.; Guion, Robert Lee; McIver, Garland; McKoy, Milard; Morrow, Calvin F.; Morrow, William H.; Pope, Isaac; Saulters, John A.; Thompson, Julius A.; Thompson, Thomas G.; Upperman, William.

Tailoring—Barker, Frank L.; Baugham, Harvey R.; Bitting, Paul Steele; Boyd, Charlie; Brown, William T.; Freeman, Silas D.; Goins, Effie Desere; Hyman, Ishmael H.; Johnson, James Hicks; Jones, Ora W.; Kelly, John D.; King, Adolphus H., Jr.; Lambeth, John L.; Loveless, Ernest T.; Newby, Richard A. L.; Outlaw, William P.; Price, Jonathan; Thomas, Daisy S.; Thompson, Annie Jane; Thorpe, Louis E.; Turman, Loreda F.; Walker, John F.; Wallace, Hazel W.; Whitley, Arthur Lee; Williams, Robert J.

Welding—Kennedy, Robert Lee; Morton, Jacob.

## COMMISSIONED AS SECOND LIEUTENANTS, ORGANIZED RESERVE CORPS (INFANTRY), UNITED STATES ARMY

Herman M. Burney  
Harold Hutcherson  
James L. Johnson  
Joseph E. Lindsay

Norris, Mann, Jr.  
Ernest P. Robinson  
John W. Tate  
David H. Wagner

## DEGREES CONFERRED MAY 31, 1948

### RANKING STUDENTS

With highest honor	Edward Depriest Clark
With highest honor	Dorothy Lee Watford McIver
With highest honor	Dorothy Blandenia Simmons
With highest honor	Rubye E. D. M. Troxler
With high honor	Travis Lee Banks
With high honor	Mae F. Bradshaw
With high honor	Carolyn Garland Brown
With high honor	Walter Percival Carter
With high honor	George Carroll Gail
With high honor	Wardsworth Gray
With high honor	W. Filmore Haith
With high honor	Eugene Marrow
With high honor	Loreno Yolande Mebane
With high honor	Ernmise Naomi Smith
With high honor	Lelia Viola White
With honor	Elihue Barden
With honor	Blanche Juanita Boomer
With honor	Willie Mae Broadnax
With honor	Myrtis Carolyn Edgecombe
With honor	Sophia Virginia Holley
With honor	Harold Hutcherson
With honor	Christine D. Johnson
With honor	Idell Jones
With honor	Ruth Evelyn Jones
With honor	Joseph Columbus McKinney
With honor	Maceo Conrad Martin, Jr.
With honor	Annie Reynolds Massey
With honor	William Charles Pryor
With honor	John Cadmus Rawls
With honor	James Allen Rowe
With honor	Lois Juanita Samuels
With honor	James Skelton

### BACHELOR OF SCIENCE IN AGRICULTURE

Jule Delena Banks	Rt. 2, Box 8, Maud, Tex.
Arthur P. Bell	Rt. 1, Box 104a, Reidsville, N. C.
Theodore Roosevelt Bryant	Rt. 2, Box 107, New Bern, N. C.
William Clarence Bunch	241 N. Elm St., Winston, N. C.
Eddie Brice Coleman	Rt. 2, Shelby, N. C.
Eugene Covington	531 8th St., Charlotte, N. C.
Robert Scott Darden	P. O. Box 174, Lewiston, N. C.
Walter Eddie Foster	Rt. 1, Box 11, Emporia, Va.
Benjamin F. Gadsden, Jr.	Box 102, Winton, N. C.
Ezra Coke Gilliam	Rt. 4, Box 101, Salisbury, N. C.
James Miller Goode	Box 121, Macon, N. C.
Edward Willie Gray	Walnut Cove, N. C.
Robert Lee Harper	810 E. Holley St., Charlotte, N. C.

Benjamin Watkins Harris	Rt. 2, Box 184, Rougemont, N. C.
Woodrow R. Harrison	General Delivery, Cumnock, N. C.
Harold Hutcherson	Rt. 5, Box 202-A, Oxford, N. C.
Booker T. Jackson	Box 96, Reidsville, N. C.
Richard Bernard Johnson	206 Gilmer Ave., N. W., Roanoke, Va.
Cornelius Anthony Jordan	General Delivery, Pollocksville, N. C.
Booker T. McNeil	138 S. 5th St., Smithfield, N. C.
Eugene E. McKoy	411 Odd-Fellow St., Sanford, N. C.
Henry F. Mebane	Rt. 3, Box 158, Greensboro, N. C.
Warren Harding Mitchell	Rt. 1, Elm City, N. C.
George Linwood P. Moore	2239 W. 16th St., Philadelphia, Pa.
James Alfred Page	Rt. 2, Mullins, S. C.
Willard L. Pierce	606 Watson St., Greensboro, N. C.
Howard Franklin Robinson	707 Law St., Greensboro, N. C.
Moses Edward Russell, Jr.	General Delivery, Wise, N. C.
Burnell Willie Lee Simmons	1617 Nelson St., Greensboro, N. C.
Harris Gordon Thompson	Fairmont Rd., Lumberton, N. C.
Riddick Earl Wilkins	Box 72, Roper, N. C.
Allen Williams	1952 Lowell Street, Arlington, Va.
Thomas Thackery Williams	P. O. Box 325, Roanoke Rapids, N. C.

### BACHELOR OF SCIENCE IN HOME ECONOMICS

Mary Henrietta Lee Armstrong	Rt. 1, Box 183, Elm City, N. C.
Ethell Arnold	Rt. 2, Box 109A, Jacksonville, N. C.
Reginald Lee Ashford	503 E. South St., Kinston, N. C.
Geraldine Battle	307 Huffman St., Greensboro, N. C.
Sarah Carolyn Davis	Box 142, Meadowview, Va.
Nancy Foote	Mocksville, N. C.
Eva Mae Graham	1204 Kivett Drive, High Point, N. C.
Vonne Beulah Hargett	Williamston, N. C.
Lillie Lois Hayes	Rt. 1, Box 47, Atkinson, N. C.
Rozena Virginia Heath	419 Vanderhost St., Winnsboro, S. C.
Virginia Novella Horton	100 East Finley, Lenoir, N. C.
Mal Virginia James	State Teachers' College, Fayetteville, N. C.
Elizabeth Johnson	Rt. 1, Box 122, Jackson, N. C.
Idell Jones	Simms, N. C.
Mary Helen LeGrand	702 Sevier St., Greensboro, N. C.
Pauline McKethon	Rt. 1, Box 44, Linden, N. C.
Dorothy Lois Martin	Warsaw, N. C.
Mary Garland Medley	P. O. Box 445, Halifax, Va.
Edmonia Miller	Rt. 4, Box 208, Rock Hill, S. C.
Gloria Reid	Rt. 7, Box 10, Fayetteville, N. C.
Dorothy Tillman	429 N. Myers St., Charlotte, N. C.
Laverne Mary Trent	1306 Sloan St., Greensboro, N. C.
Mildred Vernese Turner	526 4th Ave., Hickory, N. C.
Elizabeth Luster Walden	Rt. 4, Asheboro, N. C.
Lelia Viola White	953 E. Washington St., Greensboro, N. C.
Esther Bernice Wooten	Maysville, N. C.
Dorothy Louise Yarboro	600 Cumberland St., Fayetteville, N. C.
Anna Mae Young	Box 59, Spindale, N. C.

**BACHELOR OF SCIENCE IN BUSINESS ADMINISTRATION**

Bernard Don Barno	109 Divine St., Florence, S. C.
Warren Gibson Cabiness	403 Antrum St., Shelby, N. C.
John Herbert Carr	214 W. Moore St., Mooresville, N. C.
Walter Percival Carter	211 N. Church St., Monroe, N. C.
Wilmer Derr	509 S. 12th St., Hickory, N. C.
Frank Washington Dulin	Rt. 2, Box 60, Advance, N. C.
Hilliard E. Gilmore	308 E. Dixon St., Laurinburg, N. C.
John William Johnson	1102 Pleasant St., Beloit, Wis.
Sinclair Crosby McCorkle	P. O. Box 72, Maiden, N. C.
Kester Congress Mitchell	Elm City, N. C.
Carrothers Johnson Moore	810 Maple St., Charlotte, N. C.
Wade Hampton Moore	1116 Ramsey St., Fayetteville, N. C.
William Lawrence Nance	General Delivery, Garland, N. C.
Mary E. Propst	56 Ring St., Concord, N. C.
William Charles Pryor	561 Francis St., Pittsburgh, Pa.
Willie Q'McManus	167 Condem Rd., Cheraw, S. C.
Ernest Pinckney Robinson	41 Madison Ave., Asheville, N. C.
Albert Harry Saddler	48 Clingman Ave., Asheville, N. C.
Robert Lee Teele, Jr.	610 Tyson St., Greenville, S. C.
Lathan Wallace	Rt. 3, Box 156, Vanceboro, N. C.
Charles L. Woods	1705 Lindsay St., Greensboro, N. C.

**BACHELOR OF SCIENCE IN COMMERCIAL EDUCATION**

Frances Amelia Adams	1701 E. Market St., Greensboro, N. C.
Dorothy Lois Bradley	1 Jasper St., Thomasville, N. C.
Carolyn Garland Brown	1711 Bedford Ave., Lynchburg, Va.
Lillian Catherine Brown	325 Church St., Thomasville, N. C.
Georgie Hamlett Chambers	918 W. Horah St., Salisbury, N. C.
Clementine Davis	P. O. Box 63, Ridgeway, N. C.
Willie Goldie Finney	924 Shock Cleveland Ave., Winston-Salem, N. C.
Elizabeth Ellen Garrett	Rt. 2, Box 31, Greensboro, N. C.
Recie H. Gerst	Rt. 2, Box 176, South Boston, Va.
Mary Lee Glymph	12 Newberry St., Jacksonville, N. C.
Mary Jane Hinson	Rt. 1, Box 261, Wadesboro, N. C.
Ruth Elizabeth Holmes	205 N. Pugh St., Lexington, N. C.
Omeata Delores Howard	19 S. 15th St., Wilmington, N. C.
Edward Kluttz	Wadesboro, N. C.
Minnie W. McCorkle	Rt. 4, Box 78, Kannapolis, N. C.
Dorothy Lee Watford McIver	1810 E. Market St., Greensboro, N. C.
Ralph Curtis Mason	66 3rd St., Albany, N. Y.
Ellen Massenburg	1013 E. Bragg St., Greensboro, N. C.
Annie Reynolds Massey	441 N. Dudley St., Greensboro, N. C.
Lena Virginia Matthews	1735 Thurmond St., Winston-Salem, N. C.
Rebecca Irene Peterson	Box 50, Parkersburg, N. C.
Frances Hickman Siler	1201 Gray St., Greensboro, N. C.
Dorothy Blandenia Simmons	906 Julian St., Greensboro, N. C.
Rubye E. D. M. Troxler	2204 E. Market St., Greensboro, N. C.
Olga Bruce Warren	725 20th St., Newport News, Va.
Rubena Lee Watkins	208 4th St., West View, Martinsville, Va.



**BACHELOR OF SCIENCE IN ARCHITECTURAL ENGINEERING**

Edward Bowden Lamar-----2143 Gordon Rd., Atlanta, Ga.  
 Edward Foy Parrish, Jr.-----2021 Milledgeville Rd., Augusta, Ga.

**BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING**

Travis Lee Banks-----517 Banks St., Greenville, N. C.  
 Elihue Barden-----2203 Chataqua St., Durham, N. C.  
 Richard Lee Johnson-----912 High St., Greensboro, N. C.

**BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING**

Henry Bernard Bason-----803 Doris St., Greensboro, N. C.  
 Charles William Gadson-----Rt. 1, Box 19, Maysville, N. C.  
 William Howard Ike-----15 N. 54th St., Philadelphia, Pa.  
 Joseph Columbus McKinney-----Magnolia, N. C.  
 Leo Gabriel Baker-----226 W. 111th St., New York, N. Y.  
 Isaac Barnett-----Box 236, South Boston, Va.  
 John E. Carlson-----906 Cassell St., High Point, N. C.  
 Malachi Cromartie-----General Delivery, Dublin, N. C.  
 Emanuel Simpkins Douglass-----846 Gray Ave., Winston-Salem, N. C.  
 Wilbur Eggleston, Jr.-----507 White St., Elizabeth City, N. C.  
 George Carroll Gail-----510 Robert St., Baltimore, Md.  
 John Thomas Gibson-----1219 Elliott St., Fayetteville, N. C.  
 James Gregory Henry-----Box 115, Burgaw, N. C.  
 George Robert Jackson-----Rt. 1, Box 4, Clover, S. C.  
 Thomas Anthony Lang-----1422 McConnie St., Jacksonville, Fla.  
 Nathaniel Sylvester Moorehead-----1322 Oakland Ave., Greensboro, N. C.  
 Edgar D. Murphy-----417 N. Davis St., Kinston, N. C.  
 Edward Powell-----2014 Gorrell St., Greensboro, N. C.  
 Ausborne Debro Whitley-----814 W. Washington St., Goldsboro, N. C.  
 Herman C. Wilson-----Box 113, Carthage, N. C.

**BACHELOR OF SCIENCE IN FINE ARTS**

Hugh D. Bullock-----Rt. 1, Box 129, Creedmoor, N. C.  
 Mildred Areace Bryant-----709 Druid Hill Ave., Baltimore, Md.  
 Linnie Bernice Beaman Foster-----916 Gorrel St., Greensboro, N. C.

**BACHELOR OF SCIENCE**

Mae Belle Ashford-----Warsaw, N. C.  
 Beatrice Bailey-----Rt. 2, Box 19C, Lillington, N. C.  
 Henry Battle-----307 Huffman St., Greensboro, N. C.  
 Doris Leroy Black-----13 C Taylor St., Elizabeth City, N. C.  
 Blanche Juanita Boomer-----208 Perry St., Elizabeth City, N. C.  
 Mae F. Bradshaw-----Rt. 3, Box 10, Mebane, N. C.  
 Willie Mae Broadnax-----P. O. Box 455, Leaksville, N. C.  
 George A. Brown-----1607 Clarke Ave., Winston-Salem, N. C.  
 Samuel Edward Brown-----109 Elbert St., Milledgeville, Ga.  
 Samuel Lewis Brown-----125 10th Ave., Birmingham, Ala.

Cornell A. Brumfield	616 N. Bradley St., Gastonia, N. C.
Herman Matthews Burney	Rt. 2, Box 54, Salisbury, N. C.
Alton V. Butler	732 W. 25th St., Winston-Salem, N. C.
Lonnie P. Byarm	1500 Lindsay St., Greensboro, N. C.
Willie Susan Chasten	Rt. 1, Box 143, Chinquapin, N. C.
Edward Depriest Clark	Box 28, Chadbourn, N. C.
William Crandol	Rt. 5, Box 170, Greenville, N. C.
Dorothy Lee Cross	Farmer, N. C.
Donald Emile Dawkins	1263 Grothe St., Jacksonville, Fla.
Louis Andrew Donaldson	809 Sherman St., Badin, N. C.
James Herbert Earley	614 Polk St., Lynchburg, Va.
Myrtis Carolyn Edgecombe	1512 Henrietta Ave., W. Palm Beach, Fla.
Eunice O'Neil Forbes	100 Grune St., Greenville, N. C.
Carl Oscar Foster	424 Banks St., Greensboro, N. C.
T. Renard Foy	1604 E. Market St., Greensboro, N. C.
Freddie Elaine Frazier	408 Gregg St., Marion, N. C.
William Leon Fulp	1224 N. Jackson St., Winston-Salem, N. C.
Wardsworth Gray	5236 W. Pennsgrove St., Philadelphia, Pa.
W. Filmore Haith	400 Stewart St., Greensboro, N. C.
Helen Hatchett	Rt. 4, Box 644, Greensboro, N. C.
Dona Olivia Hendley	439 W. Church St., Gainesville, Fla.
Mable E. Hendley	439 W. Church St., Gainesville, Fla.
Lorraine Augusta Henry	Box 147, Brookneal, Va.
Annie B. Herbin	Rt. 3, Box 209, Greensboro, N. C.
Eleanor W. Hodges	Warsaw, N. C.
Lucille Clarice Holcombe	617 N. 30th St., Richmond, Va.
Sophia Virginia Holley	418 Stark St., Elizabeth City, N. C.
Edith L. Holloway	213 Burkemont Ave., Morganton, N. C.
Harold Houston Hooper	159 Burton St., Asheville, N. C.
Christine D. Johnson	1353 5th Ave., Hickory, N. C.
Gardenia Johnson	Box 752, Greensboro, N. C.
James Lee Johnson	916 Joseph St., Birmingham, Ala.
LaPerle R. Jones	Box 24, Alexander, N. C.
Ruth Evelyn Jones	3201 Chestnut Ave., Newport News, Va.
Thomas Leander Jones	New Bern, N. C.
Fannie B. Kress	607 Fairview St., High Point, N. C.
Harold Cleon Lassiter	Farmer, N. C.
George A. Lawson	1008 E. Bragg St., Greensboro, N. C.
Hattie Ledbetter	Wadesboro, N. C.
Martha H. London	409 Orange St., Shelby, N. C.
Wilma McCallum	120 Huffman St., Greensboro, N. C.
Willie Lee McClendon	812 Federal, Orlando, Fla.
George W. McMillan	1914½ E. Market St., Greensboro, N. C.
Juanita McNeil	West End, N. C.
Norris Griffin Mann	410 Marion St., Covington, Va.
Christine Virginia Manns	Box 95, New River, Va.
Eugene Marrow	Rt. 5, Box 9, Henderson, N. C.
Maceo Conrad Martin, Jr.	205 N. Ridge St., Danville, Va.
Mamie Ellen Mayes	Rt. 2, Taylorsville, N. C.
Loreno Yolande Mebane	Pantego, N. C.
Hannah Eliza Merritt	Rt. 1, Box 172, Lynch Station, Va.

Arthur J. Merriweather	4417 42nd Place, N. Birmingham, Ala.
Allen Lee Mewborn	P. O. Box 43, LaGrange, N. C.
Harrell E. Mitchell	Box 32, Ronda, N. C.
Nellie G. Neal	Rt. 5, Box 86, Reidsville, N. C.
Louis H. Newberry	1218 S. Bloodworth St., Raleigh, N. C.
Joseph Clemont Paige	Bennett St., Siler City, N. C.
Gilbert Grayson Patterson	1617 Bakebury St., Baltimore, Md.
Felicia Ozora Payne	202 Dyce St., Charlottesville, Va.
Harding Coolidge Powers	Rt. 1, Box 175, Wallace, N. C.
William Harding Powers	Rt. 1, Box 4, Willard, N. C.
Ruth Ophelia Price	410 Stark St., Elizabeth City, N. C.
Earlree A. Prince	3525 Thomas Ave., Miami, Fla.
John Cadmus Rawls	748 N. Arredondo St., Gainesville, Fla.
Essie Louise Reynolds	24 Spring St., Leonia, N. J.
Addie Maude Robinson	306 Huffman St., Greensboro, N. C.
Raymond Perry Rorie	805 Winchester Ave., Monroe, N. C.
James Allen Rowe	444 Wallace St., Ft. Wayne, Ind.
Gertrude Ellis Royster	Rt. 1, Nelson, Va.
Rubie Tene Royster	Rt. 1, Box 170, Nelson, Va.
Lois Juanita Samuels	611 N. Greenwood Ave., Winston-Salem, N. C.
Thelma Bowers Sandifer	1206 Sloan Street, Greensboro, N. C.
Ernest Eldridge Sims	P. O. Box 959, Avon Park, Fla.
James Skelton	1214 E. Washington St., Greensboro, N. C.
Ernise Naomi Smith	160 W. 118th St., New York, N. Y.
Geraldine V. Smith	805 Bennett St., Greensboro, N. C.
Seth Walter Spellman	423 W. Cypress St., Elizabeth City, N. C.
Hilda Grace Stanford	505 E. South St., Kinston, N. C.
Lottie Ruth Steele	Harmony, N. C.
Mary Magdalene Strickland	Rt. 2, Clinton, N. C.
Orebelle Deloris Strickland	Rt. 2, Box 2, Clinton, N. C.
Abram Dearborn Taylor	425 Bennett St., Greensboro, N. C.
Ernell Elizabeth Thompson	816 N. Center St., Goldsboro, N. C.
Charles Herman Thorpe	2601 E. Market St., Greensboro, N. C.
Joseph T. Threadgill	582 E. 165th St., New York, N. Y.
Julius Threet, Jr.	1106 23rd St., West Palm Beach, Fla.
Abe Thurman	326 Ridgewood Ave., Newark, N. J.
George Edward Tillett	403 N. Granville St., Edenton, N. C.
William R. Tolles	1522 24th Ave., Seattle, Wash.
Albert Demetrious Tomlinson	318 N. Fourth St., Smithfield, N. C.
Vivian E. Totten	Sedalia, N. C.
David H. Wagner, Jr.	Rt. 1, Box 321, Lexington, N. C.
Harold L. Watkins	863 Jefferson Ave., Brooklyn, N. Y.
Charles A. Weaver	Fowler St., Chapel Hill, N. C.
Floyd Hugh Williams	2601 E. Market St., Greensboro, N. C.
Clarence O. Williamson	703 Benbow Rd., Greensboro, N. C.
Eugene Wood	1215 Murchison Rd., Fayetteville, N. C.
Hattie Mae Vines	Rt. 3, Box 499, Rocky Mount, N. C.

**MASTER OF SCIENCE IN RURAL EDUCATION**

Alian A. Melton, A.B., Bennett College, 1935. Thesis: A Study of the Relationship of Certain Objective Socio-Economic Background and Personality Factors to Achievement in Fourth Grade Classes in an Urban School.

James Edward Coppage, B.S., A. and T. College, 1940. Thesis: A Study of Vocational and Industrial Education Shops and Equipment in Negro High Schools of North Carolina and the Teaching Objectives Followed.

# ENROLLMENT BY COUNTIES IN NORTH CAROLINA

## 1948-1949

Alamance -----	20	Jones -----	15
Alexander -----	5	Lee -----	11
Anson -----	21	Lenoir -----	27
Ashe -----	3	Lincoln -----	1
Beaufort -----	31	McDowell -----	1
Bertie -----	18	Martin -----	17
Bladen -----	23	Mecklenburg -----	53
Brunswick -----	20	Montgomery -----	6
Buncombe -----	13	Moore -----	20
Burke -----	4	Mt. Holly -----	1
Cabarrus -----	18	Nash -----	14
Caldwell -----	5	New Hanover -----	22
Camden -----	1	Northampton -----	25
Carteret -----	13	Onslow -----	11
Caswell -----	6	Orange -----	13
Catawba -----	10	Pamlico -----	2
Chatham -----	18	Pasquotank -----	13
Chowan -----	10	Pender -----	10
Cleveland -----	44	Perquimans -----	9
Columbus -----	24	Person -----	20
Craven -----	31	Pitt -----	58
Cumberland -----	24	Polk -----	1
Currituck -----	2	Randolph -----	9
Dare -----	1	Richmond -----	17
Davidson -----	13	Robeson -----	54
Davie -----	3	Rockingham -----	27
Duplin -----	22	Rowan -----	26
Durham -----	34	Rutherford -----	16
Edgecombe -----	32	Sampson -----	18
Forsyth -----	75	Scotland -----	13
Franklin -----	22	Stanly -----	6
Gaston -----	11	Stokes -----	4
Gates -----	12	Surry -----	8
Granville -----	24	Swain -----	1
Greene -----	13	Transylvania -----	1
Guilford -----	339	Tyrrell -----	3
Halifax -----	40	Union -----	13
Harnett -----	16	Vance -----	17
Henderson -----	1	Wake -----	59
Hertford -----	33	Warren -----	49
Hoke -----	10	Washington -----	10
Hyde -----	3	Wayne -----	42
Iredell -----	6	Wilkes -----	4
Jackson -----	3	Wilson -----	24
Johnston -----	35	Yadkin -----	1



## ENROLLMENT BY STATES

1948-1949

Alabama -----	35	New York -----	57
Arkansas -----	1	North Carolina -----	1895
Connecticut -----	4	Ohio -----	24
District of Columbia -----	9	Oklahoma -----	1
Florida -----	78	Pennsylvania -----	53
Georgia -----	61	Rhode Island -----	1
Illinois -----	8	South Carolina -----	234
Indiana -----	6	Tennessee -----	23
Kentucky -----	3	Texas -----	4
Louisiana -----	7	Virginia -----	228
Maryland -----	19	West Virginia -----	9
Massachusetts -----	2	British West Indies -----	1
Michigan -----	1	Puerto Rico -----	9
Mississippi -----	6	West Africa -----	3
Missouri -----	1		
New Jersey -----	39	Total -----	2822

## SUMMARY OF ENROLLMENT

1948-1949

Senior Class -----	395
Junior Class -----	657
Sophomore Class -----	752
Freshman Class -----	896
The Trade School -----	222
Graduate Students -----	51
Special Students -----	32
Total -----	3005
Total enrollment, excluding duplicates, regular session, 1948-49 -----	3005
Summer Quarter, 1948 -----	1187
Summer Quarter, Graduate Students -----	292
Grand Total, 1948-49 -----	4484



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